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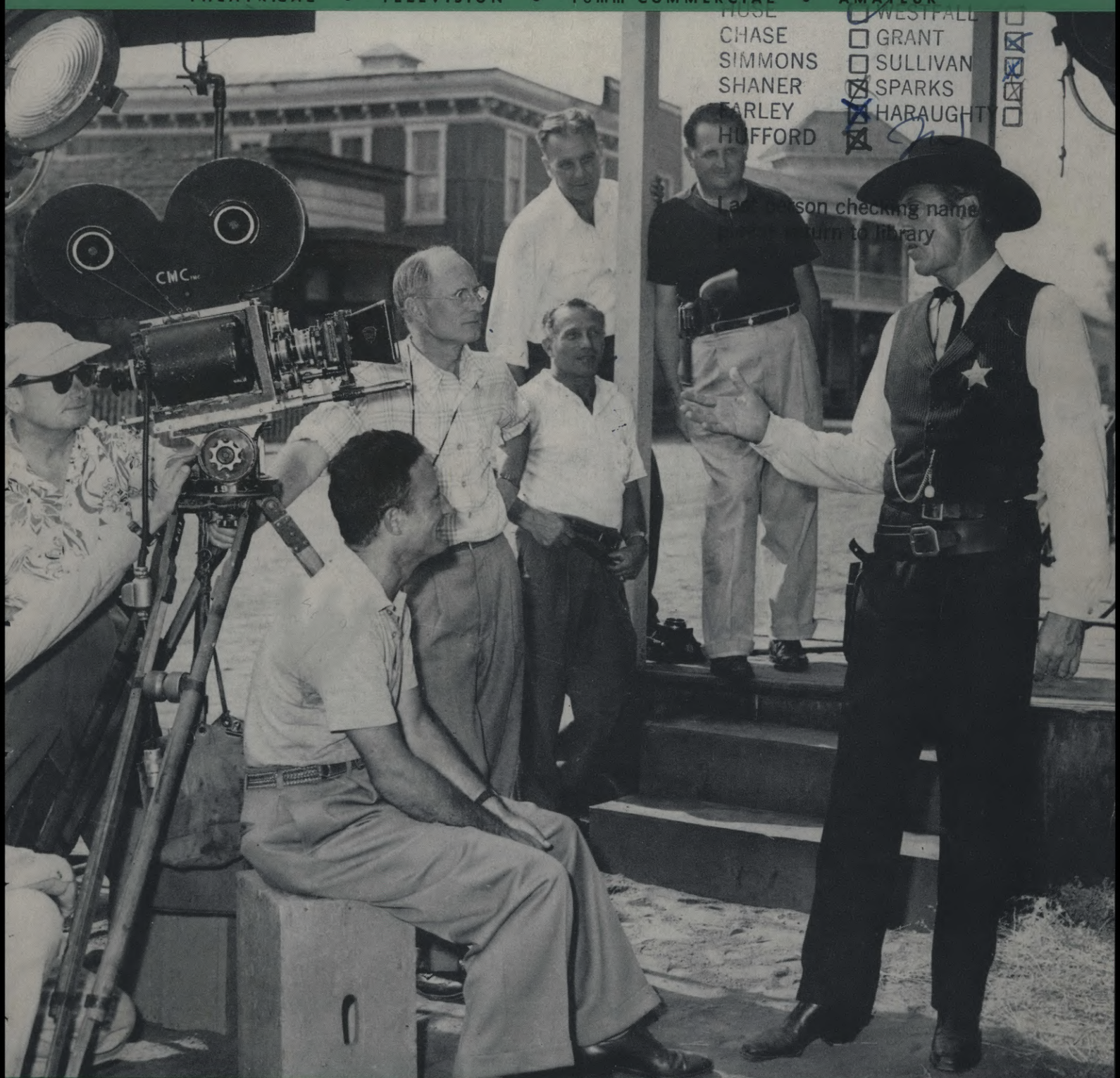
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THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

THEATRICAL • TELEVISION • 16mm COMMERCIAL • AMATEUR



Gary Cooper rehearses scene for "High Noon," photographed by Floyd Crosby, A.S.C.

THIS MONTH

- **Filming Quo Vadis In Italy**
- **Production of "TV Commercials" On Film**
- **1952 Amateur Motion Picture Competition**

OCTOBER 1951



PHOTO BY FRANK TANNER

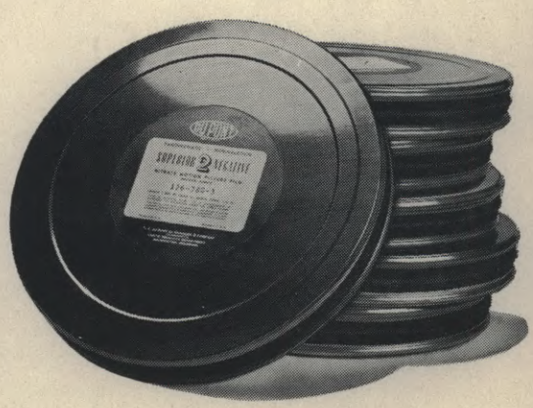
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"A Millionaire for Christy"—a Thor Production by Bert Friedlob for 20th Century-Fox—is another fine picture produced this year on Du Pont Motion Picture Film. Co-starred in this sparkling new comedy are Fred MacMurray and lovely Eleanor Parker.

On the set—and ready for a "take"—are Miss Parker, director George Marshall and the camera crew. Seated at the camera is Academy Award-winning cinematographer Harry Stradling, A.S.C.—long an enthusiastic user of Du Pont "Superior" 2.

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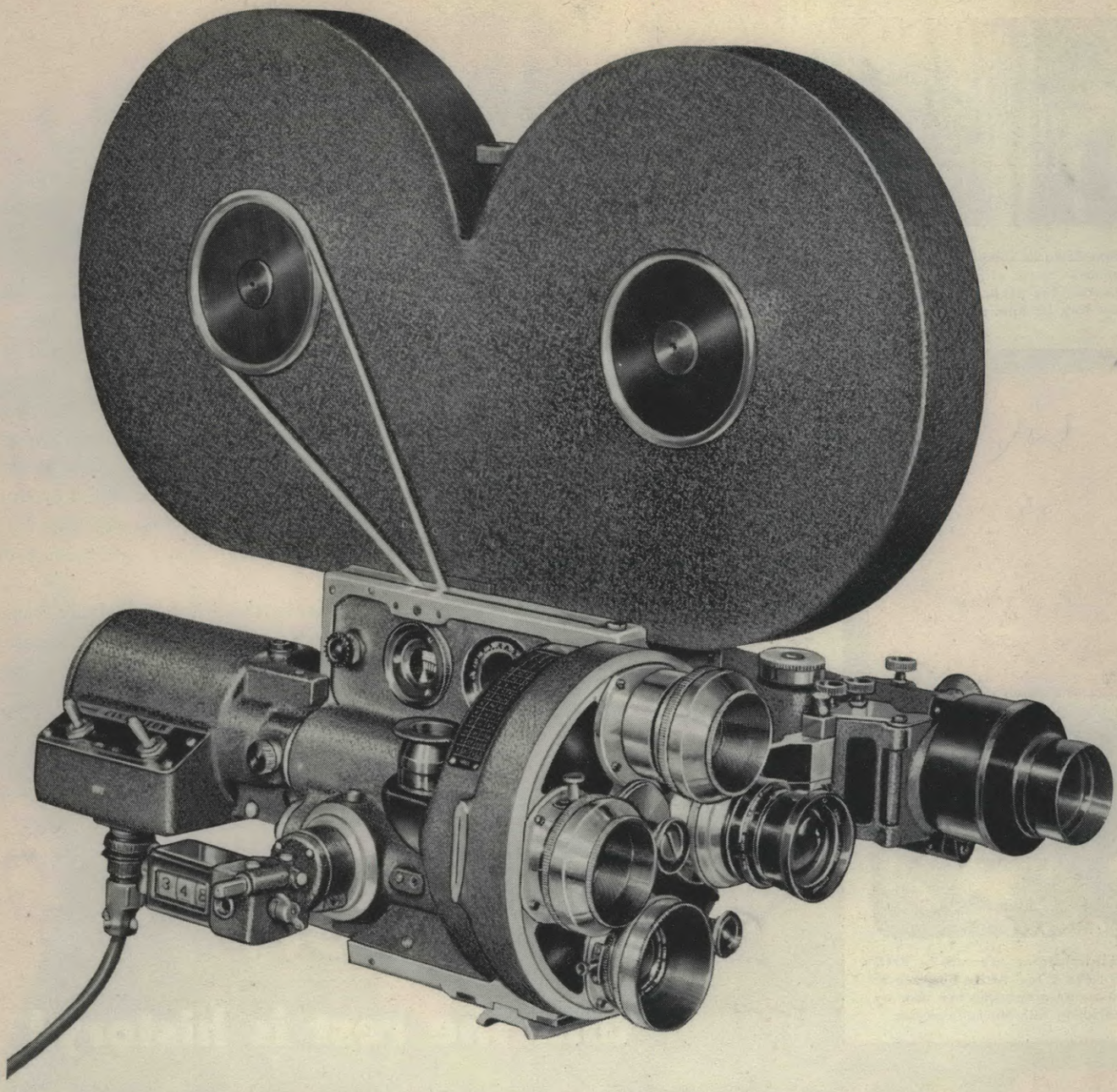


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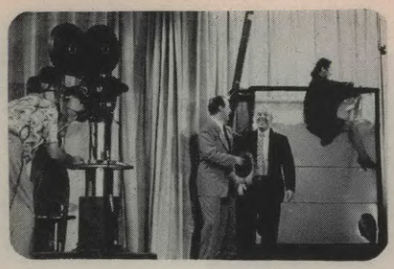
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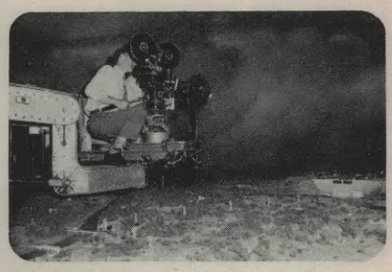


Ralph Edwards shoots his "Truth or Consequences" show with four Mitchell 35mm cameras. The program is filmed "live" in New York for later release on TV networks.

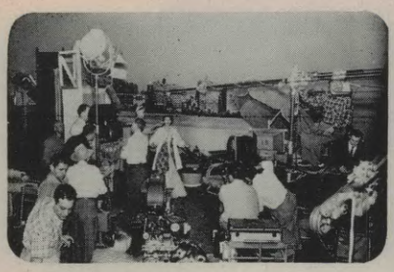
Over 30 years ago Mitchell made history with the introduction of the motion picture camera that was to set new photographic standards for a growing industry. *Today,* Mitchell 16mm and 35mm equipment is being used in every field of motion picture photography.

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Today, as in the history-making years past, Mitchell 16mm and 35mm equipment continues to deliver the world's finest films. You can count on Mitchell—*the 30-year pioneer.*



Westinghouse Electric Corp.'s "Summer Storm" is filmed by Ronald Reed Prod., Inc. This is one of over 130 films for Westinghouse Electric Corp. by this producer—all filmed with 16mm and 35mm Mitchell Cameras.



Snader Telescriptions uses three BNC Mitchells to make a Toni Arden film, one of 400 3½ minute programs shot last year by this organization with Mitchell cameras.

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Procter & Gamble's "Fireside Theatre" series is filmed by Frank Wisbar Productions, Inc. with a Mitchell BNC.

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ON THE COVER

REHEARSING Gary Cooper for a closeup for the Stanley Kramer Production, "High Noon," is director Fred Zinnemann (seated), while director of photography Floyd Crosby, A.S.C. (in plaid shirt), stands by with crew ready to make the shot. Others in photo, from L to R, are: Richard Johnson, 1st assistant cameraman; Zinnemann; Crosby; Morris Rosen, grip; Homer Planette, gaffer; and Emmett Emerson, assistant director.

—Photo by Marty Crail

AMERICAN CINEMATOGRAPHER, established 1920, is published monthly by the A. S. C. Agency, Inc., 1782 N. Orange Dr., Hollywood 28, Calif. Entered as second class matter Nov. 18, 1937, at the postoffice at Los Angeles, Calif., under act of March 3, 1879. SUBSCRIPTIONS: United States and Pan-American Union, $3.00 per year; Canada, $3.00 per year; Foreign, $4.00. Single copies, 25 cents; back numbers, 30 cents; foreign single copies, 35 cents; back numbers, 40 cents. Advertising rates on application. Copyright 1951 by A. S. C. Agency, Inc.

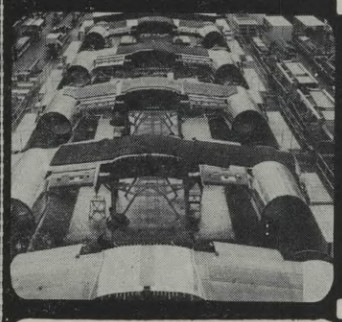
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S.M.P.T.E. Convenes In Hollywood October 15-19

Tentative program for five-day session includes important technical papers on 3-color cinematography, 16mm films, theatre television, and high-speed cinematography.

THE SOCIETY of Motion Picture and Television Engineers will open its 70th semiannual convention at the Hollywood Roosevelt Hotel in Hollywood, on October 15. The meeting will run through the 19th of October. In addition to the many sessions scheduled on important technical matters, the Society will also present special awards for the most recent outstanding technical contributions to both motion pictures and television.



PETER MOLE
S.M.P.T.E. Prexy

Peter Mole, president of the Society, in whose bailiwick the convention is being held this year, announces that also to be awarded at this session is the first of the newly established David Sarnoff Gold Medal Awards.

Theatre television, which has made its first important strides as a commercial entertainment medium within the past year, is slated to occupy the opening sessions Monday afternoon and evening (October 15), according to the tentative schedule arranged by Mole and Convention vice-president, William Kunzmann.

Tuesday morning and afternoon sessions will be devoted to reports of advances in high-speed photography, increasingly used in scientific, industrial, and military studies. Color television will be the subject of a special session to be held Tuesday evening at a Hollywood TV studio, following a studio tour during which SMPTE members will witness a network show.

The only technical session scheduled for Wednesday is a morning symposium on 16mm motion picture developments. The afternoon is to be open, and the Society's semiannual banquet and annual award ceremonies will be held Wednesday evening.

Advances in magnetic recording will be presented at morning and afternoon sessions on Thursday, and three-color cinematography will be the topic of reports and demonstrations at a Thursday evening session at the Republic Studios.

With three major studios just about ready to reveal their individual achievements with their own particular color filming systems, it is likely that some very interesting last minute papers will be presented on this subject.

Following a general "roundup session" Friday morning, the convention will close with a special program of

(*Continued on Page 430*)

CONVENTION PROGRAM AT A GLANCE
(Tentative)

MONDAY, OCTOBER 15

12:30 P.M. *Get-Together Luncheon*
3:00 P.M. *Theatre Television*
8:00 P.M. *Television:* This session includes papers on a studio installation, continuous projection, lighting, cross-talk and kine-recording.

TUESDAY, OCTOBER 16

10:00 A.M. *High-Speed Photography*
2:00 P.M. *High-Speed Photography*
8:00 P.M. *Color Television:* This session also includes visiting a television studio and viewing a television production.

WEDNESDAY, OCTOBER 17

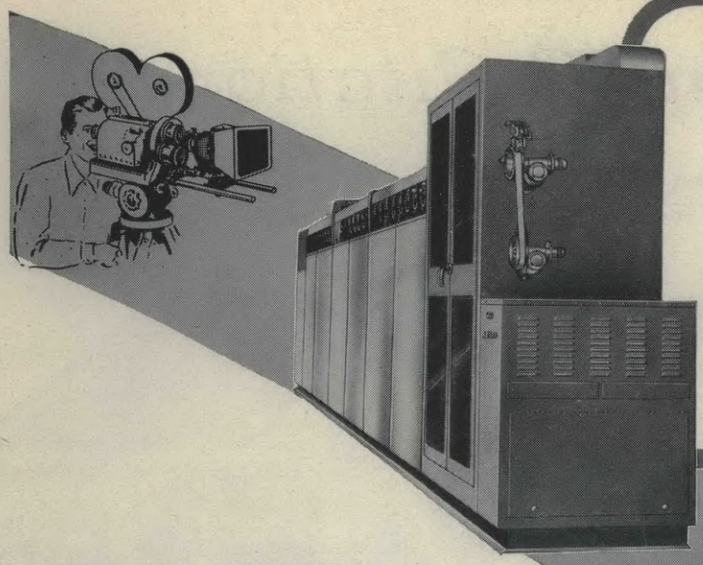
10:00 A.M. *16-Mm Film Symposium:* A panel will discuss the question "Should the present 16-mm standard emulsion position be changed?" The session will also include a panel discussion of problems relating to the quality of 16-mm sound and pictures.
2:00 P.M. No afternoon session scheduled.
7:15 P.M. *Cocktail Hour*
8:15 P.M. *Banquet and Dance* (Informal)

THURSDAY, OCTOBER 18

10:00 A.M. *Magnetic Recording:* The latest triple-track 35-mm magnetic recorders will be demonstrated and described, as will also other late developments in general magnetic recording techniques.
2:00 P.M. *Magnetic Recording*
8:00 P.M. *3-Color Cinematography:* This session includes papers by leading manufacturers of 3-color films, by color film laboratories and production studios.

FRIDAY, OCTOBER 19

10:00 A.M. *General Session*
2:00 p.m. *Stereocopic Projection*



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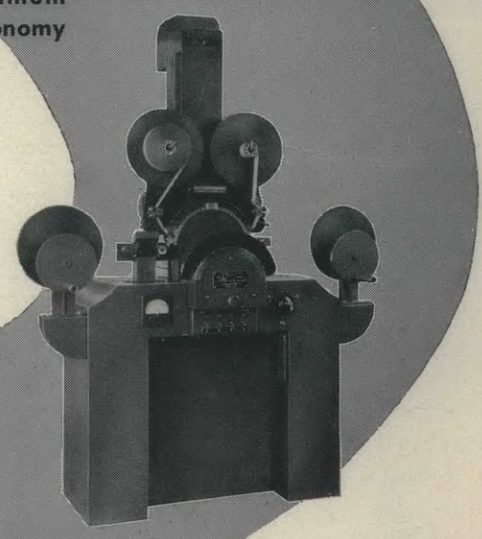
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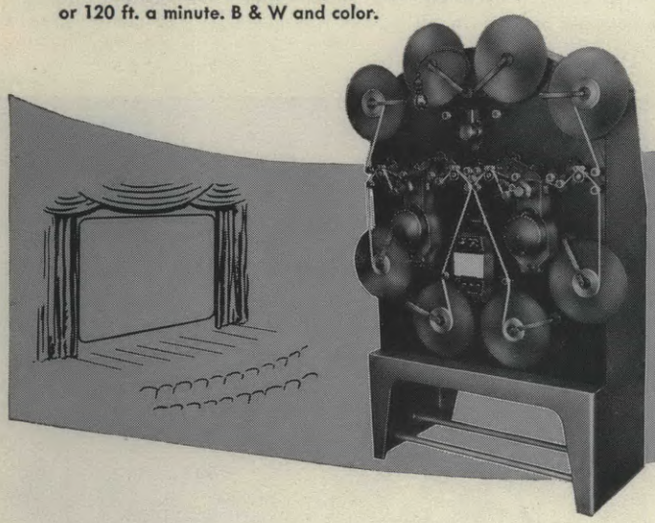
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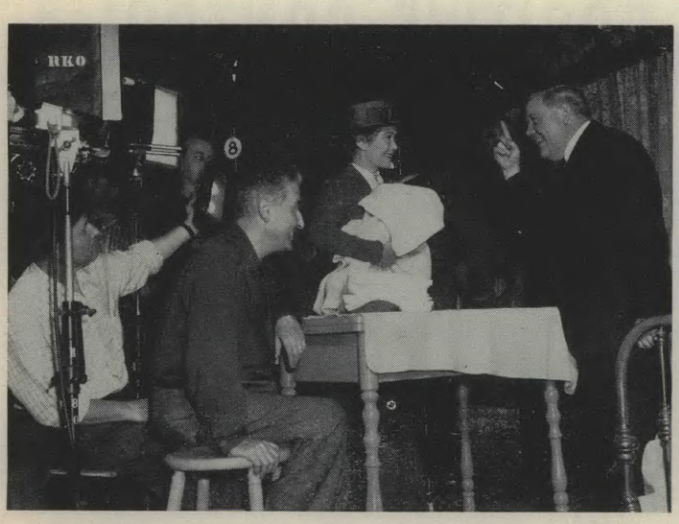
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Cinematography Citations

Outstanding achievements in photography in motion pictures previewed in Hollywood last month, recommended for study by students of cinematography.



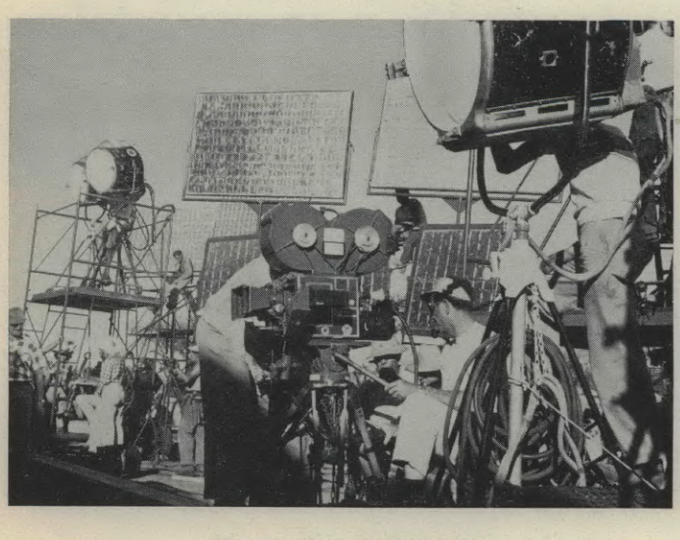
"THE BLUE VEIL"

LIGHTING and camera skill of Frank Planer, A.S.C., accomplish two notable things in this initial Wald-Krasna production: enhance illusion of Jane Wyman's aging over a period of years, and impart three-dimensional aspect to many of the sets for pictorial enhancement. Planer, exponent of deep focus, contributes to realism of scenes by applying numerous lens and lighting tricks acquired through many years' study and application here and abroad.



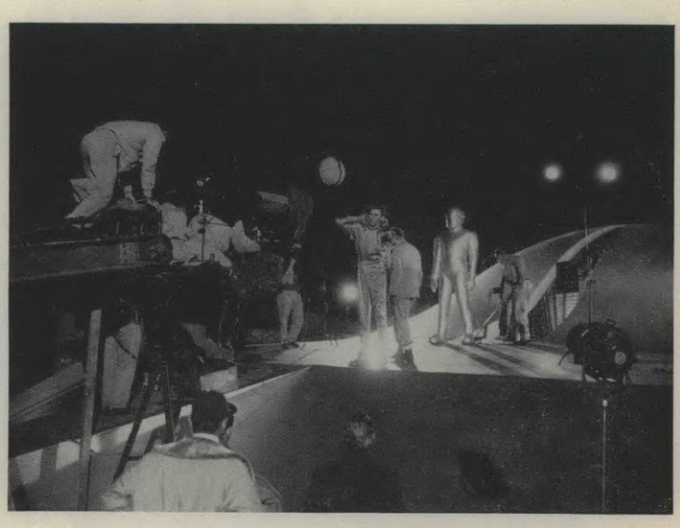
"BRIGHT VICTORY"

FILMED mostly in actual locales, lighting was thus a major problem for cinematographer William Daniels, A.S.C., in filming this fine story about blinded war veterans for Universal-International. Daniels, seasoned veteran in such situations, again achieves remarkable pictorial results, using his favorite "quad" lamps consisting of units of four photofloods each. These were used also as booster lights on location. Result: genuine realism in all scenes.



"DAVID AND BATHSHEBA"

LEON SHAMROY, A.S.C., directed the Technicolor photography of this Biblical story for 20th-Fox. The tremendous exteriors made extraordinary demands on the lighting, and for this Shamroy utilized the greatest number of booster lights and sunlight reflectors ever used for outdoor scenes. Also outstanding are many interior shots. Particularly notable is execution of dimmers on scenes where camera dollies in and out, and his sharp photography in low key light.



"THE DAY THE WORLD STOOD STILL"

SETTING an ominous mood and maintaining it throughout the picture were principal demands made upon Leo Tover, A.S.C., in filming this 20th-Fox picture. Story's about earthly visit of space ship from another planet and pilot's demonstration of supernatural powers over life on earth. More than 75% of picture is night exteriors, the lighting and photography of which are just about the best in black-and-white that has ever come out of Hollywood.

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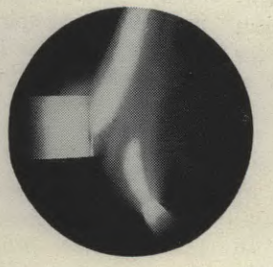
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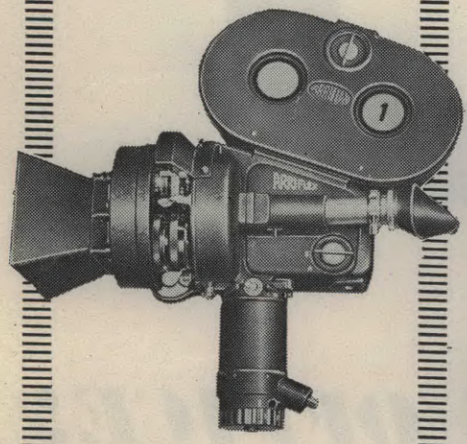
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Hollywood Bulletin Board

Floyd Crosby, A.S.C., for the second consecutive year, is serving on the faculty of motion picture division of the department of theatre arts at University of California at Los Angeles. UCLA's course on motion picture production is rated one of the best in the country, with enrollments from many foreign countries. Between class sessions, Crosby will direct the photography of feature films in Hollywood. He is currently shooting "High Noon" for Stanley Kramer.

•

October 1st marked the 25th anniversary of Edward O. Blackburn's association with J. E. Brulatour, Inc., distributors of Eastman professional motion picture films. Executive head of Brulatour's Hollywood office, Blackburn's friendships include almost every cameraman in Hollywood and most studio executives.



E. O. BLACKBURN
25th Year

Prior to accepting post with Brulatour 25 years ago, Blackburn was a talent agent for the Edward Small agency. Previously he was associated with the Rothacker-Aller laboratory in the film capital. He gained his start in the film business in Chicago where he served in various capacities, including salesmanager, film director and script writer for Rothacker-Aller's large industrial film production division.

•

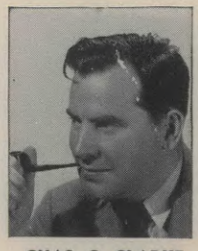
Karl Struss, A.S.C., flew to New York September 27th to take part in judging of the first annual Sylvania Television Awards. Struss, selected as one of the panel of judges several months ago, was joined by other notables, including Deems Taylor, James A. Farley, Norman Bel Geddes, and others to select winners of Sylvania's 1951 awards for achievement in the various branches of television.

•

Just to keep the record straight, two outstanding pictures photographed by Charles Lang, A.S.C., for Paramount have been retitled as follows: "Ace In The Hole," currently showing throughout the country, carries the new title of "Big Carnival." "Cantrell's Raiders," not yet released, will go into general release after first of the year under the title "Red Mountain."

•

Charles G. Clarke, A.S.C., is currently in France filming production shots and background plates in Technicolor Monopack for forthcoming 20th-Fox major production, "Snows of Kilimanjaro." Later Clarke will take his camera crew to Kenya, Africa, where assignment will be completed, and background plates for another production—"White Witch Doctor"—will be photographed.



CHAS. G. CLARKE
Globetrotter

•

Harry Jackson, A.S.C., is directing the Technicolor photography of 20th-Fox's "Way of a Gaucho" in Argentina, where the entire production is slated to be filmed.

•

A.S.C. Members and their wives celebrated the Society's annual "Ladies Night," the evening of September 15th, with a Hawaiian Luau and dance at their clubhouse in Hollywood. King for the evening was A.S.C. president Ray Rennahan who, as "King Kamehameha," presided over the Imu ceremony preceding the luau feast. About 250 members and guests were present. Event, an annual affair, is highlight in the program of monthly get-togethers which feature the cameramen's society.



RAY RENNAHAN
King for a Night

•

Joseph Brun, A.S.C., is currently directing the photography of "Walk East On Beacon," a Louis DeRochemont feature production for Columbia release. The entire picture is being shot on location, as was DeRochemont's "House On 92nd Street."

•

Metro-Goldwyn-Mayer's "The North Country," studio's initial production using its new MGM-Ansco Color system, is said to exceed all expectations, technically. Fidelity and color balance of

(*Continued on Page 397*)

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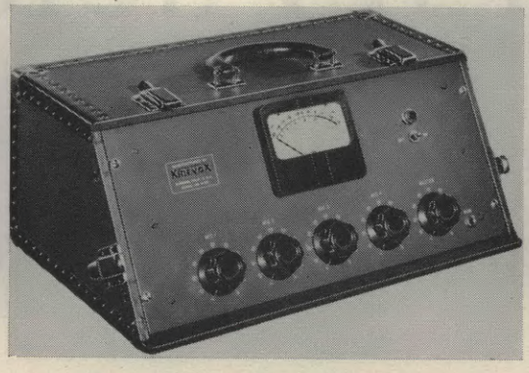
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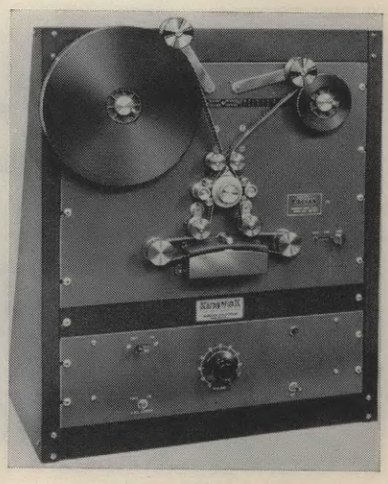
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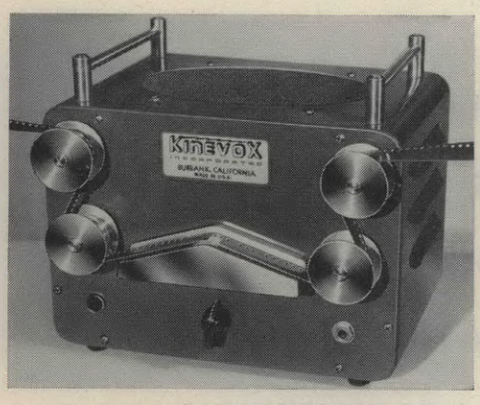
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HOLLYWOOD BULLETIN BOARD

(Continued from Page 394)

the new medium is said to equal anything filmed in any color process to date. Much of the success of the studio's new color filming system is due MGM's executive director of photography, John Arnold, A.S.C., whose extensive research in and experiments with new lights, filters and camera techniques led to its perfection.

•

A one-day symposium on photography in industry, ranging from spectrography to the planning of job-training movies, will open the convention of the Photographic Society of America at the Book Cadillac Hotel in Detroit October 10 through 13.

•

Ernest Haller, A.S.C., left Hollywood for London, September 20th, where he will consult with Technicolor's London laboratory relative to the two pictures he is scheduled to shoot in India for The Film Group of Hollywood. While there, he will also organize his camera crew, which will follow him to India and Burma. Slated to roll on October 8th is "Monsoon," with "Queen of Jhansi," the second feature, scheduled to get under way December 16th. Company will set up headquarters at the Minerva-Pathe Studio in Bombay.

•

Humberto Corell, Argentinian cameraman, reports that Trans-America Films of Buenos Aires has completed "The Gaucho," first feature film in color to be produced in Argentina. Film was processed at Laboratorios Alex in Buenos Aires.

•

Even though Hollywood studios cannot promise jobs to new cameramen coming into the field, there are four other lucrative fields open to up-and-coming cinematographers, according to Norman G. Dyhrenfurth, head of the motion picture division of the theatre arts department of University of California at Los Angeles.

Dyhrenfurth said that today's TV field is changing the specialist requirements, and those with a thorough knowledge of all the theatre arts will be the future producers and directors of TV shows and films for television.

Fields beckoning the new cameramen today are the documentary and educational film field; the new audio-visual and motion picture departments in Universities; television films; and television itself, which, Dyhrenfurth says, needs men and women thoroughly competent in cinematography and other phases of theatre arts.

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SHOOTING an extensive tracking shot in which 10,000 extras were employed. This set, representing exterior of Nero's palace, was largest constructed for the production. Steel tower, visible at upper right, was erected for making high angle shots.

The Filming of Quo Vadis *in Italy*

Some of the technical problems that beset the camera crew in filming the biggest U. S. production ever made in a foreign country.

By ROBERT L. SURTEES, A.S.C.

ALL ROADS, it has been said, lead to Rome. Today, at a turn in the most famous of all roads—the ancient Appian Way in Italy—stands a small church, the church of Dominie Quo Vadis. Legend of an incident that transpired at this spot during the reign of the mad emperor Nero later inspired the Polish literary genius, Henryk Sienkiewicz, in 1895, to write the classic novel, "Quo Vadis."

It was the year 64 A. D.—a few days before Rome had been almost destroyed by fire. Many had attributed the conflagration to Nero because of his words, "The stenches of the pig stys would never more rise the slopes of the Palatine Hill and befoul my nostrils."

History has never definitely fixed the guilt upon Nero, but it is a matter of record that he began the terrible execution of all Christians, and tried desperately to make the Roman citizenry believe themselves responsible. Christians by the thousands were rounded up, tortured, cremated alive or thrown into the arena to be devoured by wild animals.

Peter, the first disciple, by now an old man (it was now many years since Christ had been crucified) was fleeing from Rome, accompanied by Nazarius. Travelling along the Appian Way, they stopped at the turn in the road and there Peter saw a great light, as of a golden circle, advancing toward him. He shaded his eyes, then turning to Nazarius said:

"Seest thou that brightness approaching us?"

"I see nothing," replied Nazarius, who saw only the trees quivering in the distance. He looked at the Apostle with wonder. Peter let the staff fall from his hand. His eyes were staring ahead, motionless; his mouth was open. His face was a mingled expression of astonishment, delight, and rapture. Suddenly he threw himself on his knees, his arms stretched forward—his lips parted. "Oh Christ! Oh Christ!," he said, and buried his face in the earth before him. Then, after a moment of silence, he looked up and said:

"Quo Vadis, Dominie?" (Where goest thou, Lord?)

Nazarius did not hear the answer, but to Peter's ears came a sad, sweet voice which said: "If thou desert my people, I go to Rome to be crucified a second time."

The Apostle lay on the ground without motion or speech for a time, and then he arose. Seizing his staff with trembling hands he turned without saying a word, toward the seven hills of the city. Nazarius, seeing this, repeated, as an echo—"Quo Vadis, Dominie?"

"To Rome," said Peter in a firm, low voice.

And he did return. Later he was put to death on the cross—nailed upon it

upside down—as he had requested. In the end, Peter realized that neither Nero nor his legions could overcome the teachings of Christ. He knew at last why the Lord had turned him back on the road.

Today, when one visits the little church of Domine Quo Vadis, he is shown two footprints that were apparently burned in a large rock that forms part of the floor. These, he is told, were made by Christ at the time of His meeting with Peter. And during a certain time of day, through an opening in the roof overhead, the sun sends down a narrow shaft of light that forms a golden halo about the footprints. It was this awe-inspiring sight that first gave Sienkewicz inspiration to dramatize the story in novel form. His successful book has brought peace, faith and hope to millions of people, and finally, in 1905, it brought the Nobel Prize to its author.

Ever since Metro-Goldwyn-Mayer made "Ben Hur," its most successful picture, back in 1924, the studio had sought another and equally powerful story with a religious background. After a prolonged search, it was decided, about 1935, to film "Quo Vadis"—in Italy. Research and preparation work was started immediately and when we entered World War II, MGM writers were still working on an acceptable motion picture treatment. After the war, it was decided to postpone the production for another two years to permit E. J. Mannix and Henry Henigson, studio executives, to go to Italy and arrange for studio space and to survey the numerous production problems which shortage of equipment and facilities in Italy presented.

It was decided to produce "Quo Vadis" in Rome, the actual locale of the historical novel. Mannix and Henigson leased the Cinecitta Studio, located eight miles from Rome, and set in motion plans for reconditioning it.

Mussolini, in 1936, had erected Cinecitta as his answer to Hollywood's supremacy in the world film market. During the war, it had been allowed to fall into disrepair, then subsequently was converted to various uses—a factory producing war materials, a barracks for German troops, etc. It also had suffered considerably from bombing and machine-gunning by the Allies.

Mannix summoned three technicians from Hollywood to assist in the reclamation of Cinecitta and to prepare for the production of "Quo Vadis." Arriving from Hollywood shortly thereafter were art director William Horning, costume designer Herschel McCoy and set director Hugh Hunt. The tremendous undertaking that faced them required two years of hard work before a single camera started turning.

Equally difficult preparations were being made back at the Studio in Culver City. Assigned to head the production were Sam Zimbalist, producer, and Mervyn LeRoy, director. Script writers John Lee and Hugh Gray, meanwhile continued whipping the story into shape. During the 1949 Christmas holidays, members of the MGM staff in Rome were returned temporarily to Hollywood for a rest. Meantime, extensive casting tests were being made and these culminated in the selection of Robert Taylor and Deborah Kerr for the choice roles of Marcus Vinicius and Ligia. Other great names—many from the European theatre—were added to the cast: Leo Genn, as Petronius; Peter Ustinov, as Emperor Nero; and Finlay Currie and Abraham Sofaer were given the extremely important roles of Peter, the Apostle, and Paul. Other well-known players were added to the cast, including Felix Aylmer, Nora Swinburne, Ralph Truman, Norman Wooland, Rosalie Crutchley, Elspeth March, and Patricia Laffan. From among promising Italian artists, MGM chose Marina Berti for the choice role of Eunice, the slave girl. Buddy Baer, from America, was elected to play the giant slave who slays Croton, the gladiator, played by

(*Continued on Page 417*)



A LULL in the shooting at Cinecitta studio, while set is being readied for a scene for "Quo Vadis." In foreground is director Mervyn LeRoy; next to camera is director of photography Robert L. Surtees, and at right—Deborah Kerr, who played Ligia.



FILMING a chariot race on the famed Appian Way, outside of Rome. The Technicolor camera is mounted on a giant camera crane, shipped to Italy from Hollywood especially for the production.



NEW ORLEANS street scene, one of two major sets for "A Streetcar Named Desire," where much of the most dramatic action was staged. Here cinematographer Stradling's camera shoots from a boom to obtain a high angle scene equivalent to a second-story window view from across the street.

Uninhibited Camera

Harry Stradling establishes a new high in cinematic artistry with his imaginative camera treatment of "A Streetcar Named Desire."

By HERB A. LIGHTMAN

"A Streetcar Named Desire," winner of the Pulitzer Prize and the coveted New York Drama Critics Award, scored as one of the most powerful dramas in modern theatrical history when it electrified Broadway a few seasons ago. It was impossible to imagine at that time that this play could ever be translated into the language of the screen with its basic power undissipated. But Warner Brothers have accomplished the impossible by bringing the vehicle to the screen with its original honesty and force intact. If anything, the film is even more compelling than the play, because the camera has added a scope and fluidity that could not be achieved within the confines of the proscenium.

"Streetcar" is a rare blending of superbly executed cinematic elements: screenplay by its original author, Tennessee Williams; acting by Vivian Leigh, Marlon Brando, and supporting members of the Broadway cast; direction by Elia Kazan; and photography by Harry Stradling, A.S.C. These elements, each of which is a triumph in its individual right, add up to a filmic drama with Academy Award possibilities. There is such perfect *rapport* between elements that it is impossible to tell where the effect of one leaves off and the other begins.

In his superlatively executed camera treatment, director of photography Stradling has struck exactly the right note in a vehicle which made extraordinary demands upon the science of cinematography. His photographic approach called for a blending of pungent reality and vague fantasy, spirituality and animal passion, beauty and shabbiness, frustration, loneliness and violence. This *pot pourri* of paradoxical human emotions has been stirred by a master hand

(Continued on Page 424)



ADROIT, low-key lighting perfectly compimented the shabby, crowded apartment, lending realism to the bawdy action. Here a knockdown, dragout brawl ensues. Wild walls afforded dramatic camera angles.



EXTERIOR street scene, constructed on sound stage, received skillful lighting treatment, with low-key illumination lending a mood of sordidness. The night effect is in striking contrast with the day shots.

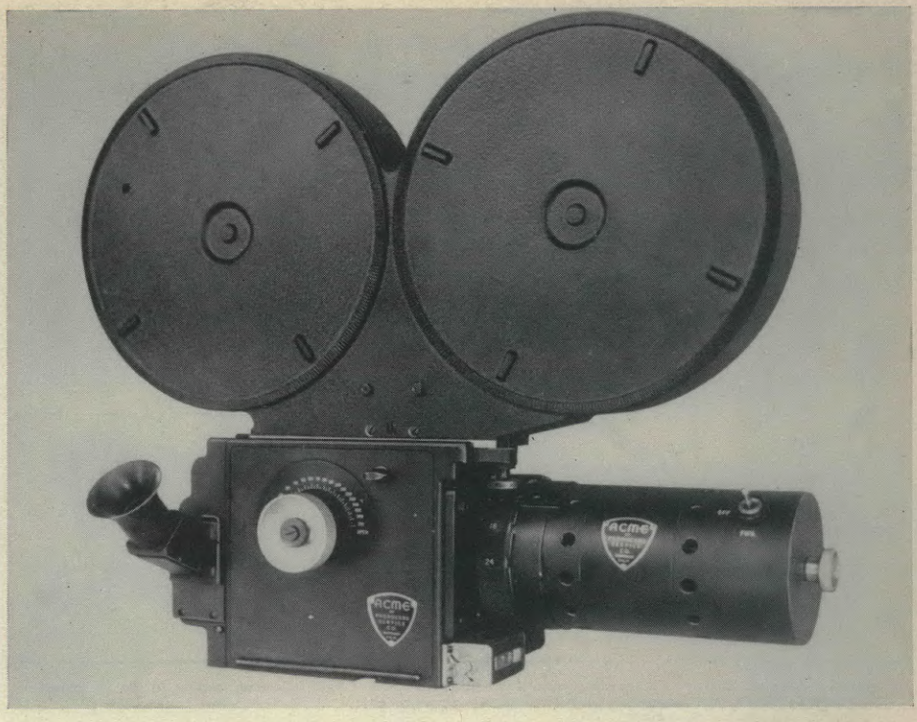


FIG. 1—The Acme Process Camera includes a color wheel for 3-color successive-frame photography. Film movement accommodates one, two, or three strips of film and maintains perfect registration on all three.

The Acme Process Camera

Designed especially to meet precision requirements of special effects photography, it is now available for 16mm as well as 35mm process work.

By JOHN P. KIEL

Producers Service Co., Burbank, Calif.

THE GREATLY ADVANCED art of process cinematography today demands a special camera having a mechanism more highly refined than that found in cameras used in ordinary motion picture photography. Until recently, it was the practice to alter a standard motion picture camera, such as Bell & Howell, Mitchell, Wall, etc., to meet the demands of special effects photography. This was usually done by the studios' own engineering departments. While such cameras proved adequate for a particular procedure, the process departments were often hampered by the limitations of the equipment.

With the Acme camera, which is now available for 16mm as well as 35mm film, Producers Service Company has met the studios' need for a specialized, yet versatile, process camera to increase the range of activity of the process departments.

Color separation negatives, matte shots and other exacting process procedures require the highest degree of accurate and positive film registration. The film movement of the Acme Process Camera, therefore, is of the solid, or stationary, register-pin type. This particular method of film registration is extremely accurate because the pins are mounted directly to the movement base and operation of the camera does not entail any motion or mechanical action of the register pins.

In order to compensate for the inherent shrinkage of film without sacrificing accuracy of registration, the registration pins are in horizontal alignment. One register pin is "full-fitting" in the film perforation; the other is "full-fitting" vertically and slightly undersize horizontally. The movements are so accurate that a single strip of film may be exposed in the camera a number of times and still maintain perfect registration on each exposure. This ability of the film movement to duplicate registration is assured regardless of the direction of film travel.

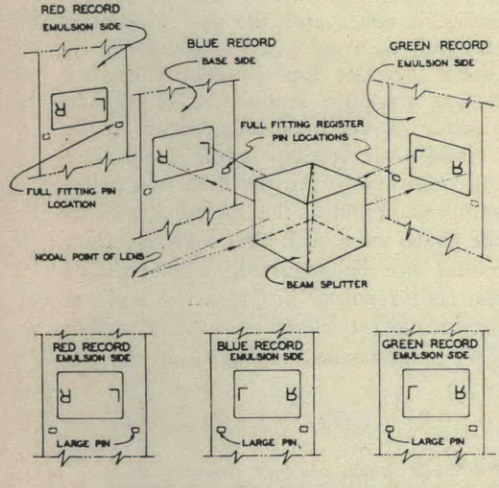


FIG. 2—Typical three-color, three-strip registration locations.

In the engineering process every precaution has been taken to eliminate the possibility of film damage; the most important, perhaps, being the elimination of pressure on the film during the pull-down cycle. After the film is located on the register pins, just before the shutter opens, a small amount of pressure is applied; but the accuracy of registration is not dependent on this pressure—it serves only to hold the film precisely in the focal plane during the exposure interval.

Pressure and stripper plates of hard-chrome plated stainless steel engage and disengage the film perforations on the register pins prior to and following the exposure.

Perhaps one of the most distinguishing features of the camera's film movement is its ability to accommodate up to three strips of film at one time, maintaining perfect registration on all three. Need for manual adjustments, when more than one film is threaded in the camera, is eliminated by the spring-loaded pressure plate, which automatically compensates for the varying film thicknesses, applying equal pressure to all.

To enable the use of this camera in conjunction with existing studio equipment and procedures, the film movements are supplied with the register pins either above or below the aperture and with the large, or "full-fitting," pin located at any one of the corners of the aperture. Moreover, the film movements are easily removed and completely

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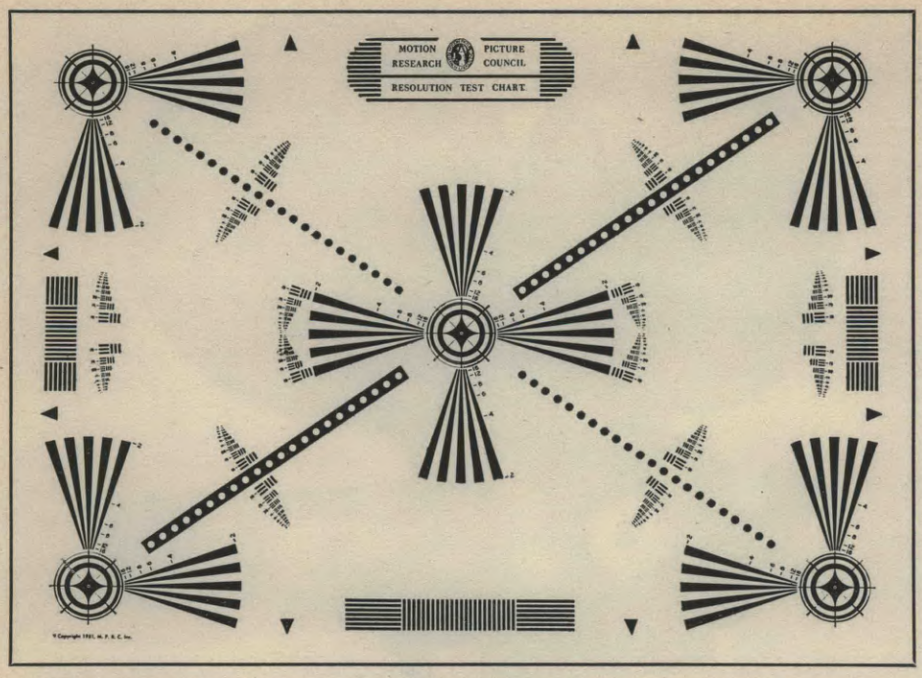


FIG. 1—Motion Picture Research Council Resolution Test Chart. Copies, enlarged to practical size, are available to the motion picture industry at small cost.

A Resolution Test Chart For Motion Picture Cameras

Improved chart for testing limits of resolution of a lens or of a lens-film combination developed by the Motion Picture Research Council, Hollywood.

By ARMIN J. HILL

Motion Picture Research Council

IN THE FALL of 1950, the Motion Picture Research Council undertook a study of the methods used in the cooperating studios to test and check their camera lenses. It was found that no standard test procedure existed, and that in general any tests that were conducted made use of whatever material and equipment was on hand at the studio. In an attempt to improve this situation, preparation of a series of standard test charts was planned, and the Council recently announced the publication of the first of these, a chart designed to test the limits of resolution of a lens or of a lens-film combination.

Lens testing can be a very intricate process if all of the various lens characteristics must be known with precision. Fortunately, what is usually required is a less precise, but simple check on such characteristics as resolution, depth of field, and setting of the focus scale. An indication of the resolution of the lens, or of the resolution of a system of lens and film, is often desirable, and if a test indicates the factors which may be limiting resolution in addtiion to showing the limits at various positions in the field, it will gve much of the information concerning a lens which is desired by the camera departments.

With this in mind, therefore, attention was first directed to the preparation of a suitable resolution test chart. A survey of published charts showed that while a few had more or less acceptable design, none would give all the information desired in a simple manner. Representatives of each of the camera departments of the major studios were asked for their suggestions. The National Bureau of Standards and the Air Forces photographic section also kindly furnished suggestions and information on their testing procedures. Various types of test figures used in the television industry were analyzed. It was decided that any study of dependence of resolution upon contrast would complicate both the chart and the test procedure and that such an analysis would constitute a separate type of test. Likewise, it was evidently impractical to include a study of depth of focus, or to make a focal scale setting at the same time that resolution over the field was being analyzed. Finally, the intended uses of the chart were such that high precision would not be required. This reduced the care required in preparing and reproducing the chart to a point where

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Fig. 1

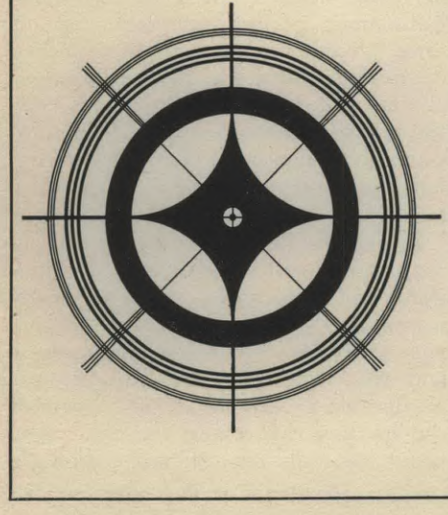
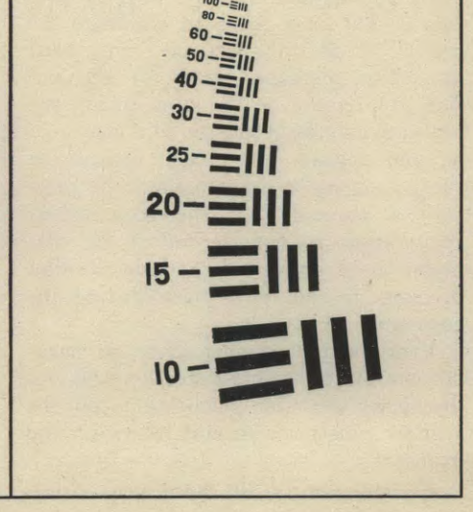


Fig. 2



ENLARGED details of chart segments are shown at left. Fig. 2 shows detail of Focus Figure while Fig. 3 is enlarged detail of the Resolution Pattern.

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AMPEX Model 401 portable magnetic tape recorder which affords half-track recording at 7½" per second, equalling the performance of 15" per second full-track recorders.

The Ampex Magnetic Recorder

Popular tape recorder employs 60-cycle control signal to maintain sync with the camera.

By RALPH LAWTON

THIS IS THE FIFTH in the series of articles by Ralph Lawton in which he describes various magnetic film and tape recording equipment applicable to the recording of synchronous sound for motion pictures. Earlier articles have illustrated and described such recorders as the Westrex (May), Kinevox (June), Stancil-Hoffman (July), and RCA (August). Mr. R. H. Ranger, in a special article in the September issue, described the Rangertone recorder. The merits of still other recorders will be treated in subsequent articles by Mr. Lawton.—EDITOR.

UNTIL RECENTLY, design and manufacture of Ampex Magnetic Tape Recorders were devoted almost exclusively to the field of radio and television broadcasting. Today, the Ampex is well established as the ideal instrument for recording radio network shows, masters, and other program material where no deterioration in original sound quality can be tolerated.

With the rapid growth of magnetic recording for motion pictures, it was only logical that the Ampex should take its place along with other professional tape and film recorders in the field of motion picture production. Full application to motion picture use awaited only perfection of Ampex's Synch-Lock device, which—coupled with the recorder—causes a 60-cycle control signal to be recorded on the tape simultaneously with the sound as a means of maintaining recorder speed in sync with the camera.

The Ampex utilizes quarter-inch tape as the recording medium. There are two recorder models: the Model 300 console and the Model 401 portable. A feature of the latter is half-track recording at 7½-inches per second speed, said to equal the performance of 15 i.p.s. full-track recorders. Up to 132 minutes of program material or motion picture sound can be combined on one ten-inch reel of tape. The machine also records at 15 i.p.s. speed.

Made to operate on 60-cycle, 115-volt current, Model 401 has been designed to feed, or be used in conjunction with any high-quality power amplifier and loud speaker combination, or a standard 600 ohm line. Otherwise, the recorder is essentially the same in design and performance as the console, Model 300.

With both models, a single control affords convenient and rapid selection of tape speeds and automatically provides the necessary equalization changes. Double flanged 10½-in. diameter NAB reels are employed. These have a capacity of 33 minutes at 15-in. per second and allow tape to be safely stored and handled.

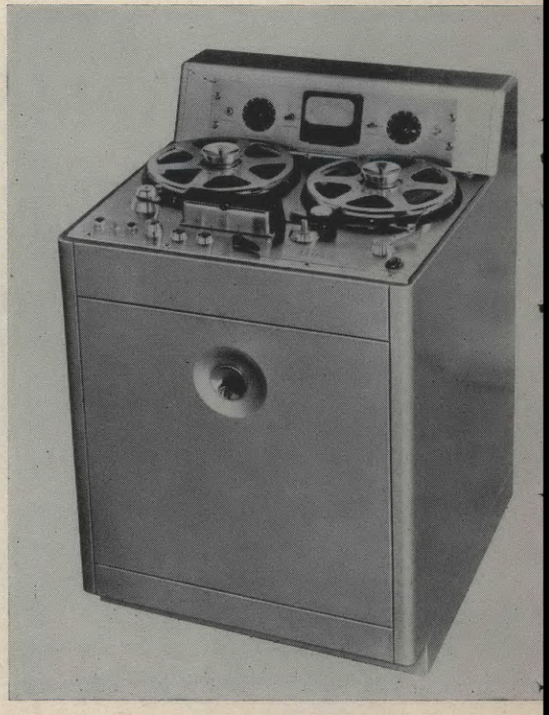
Tape transport mechanism consists of supply and takeup reels mounted on turntables carried on vertically extending shafts of the rewind and takeup drive assemblies; a capstan-drive assembly with tape-locking idler; a reel idler and compensating tension arms; and three drive motors—one for the capstan drive and the other two for the reel assemblies.

Both rewind and takeup assemblies are brake-controlled. Brakes are self-energizing in opposite directions of rotation and in such order that, regardless of tape travel direction, the supply reel will always receive the stronger braking action. Solenoid control of brakes assures their operation in unison.

Extensive engineering and research went into the design of the capstan-drive assembly. Result is a remarkably wow-free and flutter-free drive with a minimum of precise, close-tolerance parts. Tape drive is accomplished by clamping tape between a rubber-tired idler and the capstan shaft, which runs in a bronze, scientifically lubricated bearing. The capstan assembly is driven by a dual-speed synchronous motor. A special feature of the drive system is instant starting — a very desirable feature in editing. When the machine is threaded, the takeup tension arm is pulled away from its idling position by the tape, causing the capstan-drive motor to start. When the start button is depressed the rubber-tired idler clutches the tape against the running capstan, bringing it to full speed in less than a tenth of a second.

Control buttons and switches of the recorder are so located that when the

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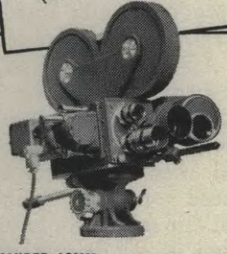


AMPEX Model 300 console type high fidelity magnetic tape recorder, long a favorite with radio engineers. Addition of Ampex Synch-Lock attachment converts recorder for synchronous motion picture sound recording.

VERSATILE PERFORMERS

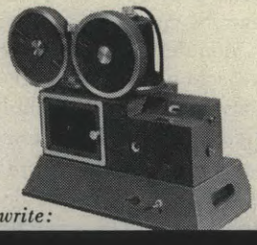


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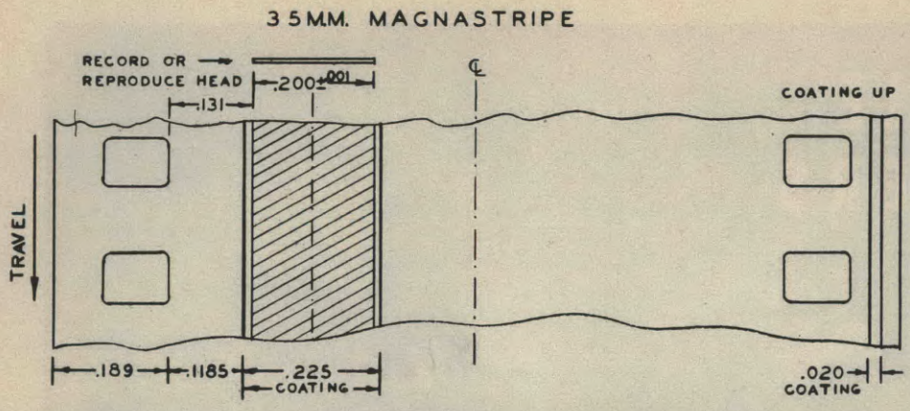


FIG. A—35mm Magnastripe, showing position of the magnetic recording sound track coating. A narrow stripe of coating is also applied on opposite edge of film, as shown at right, which balances the roll of film for winding. Magnastripe coating may also be applied to the edges of any 8mm, 16mm, or 35mm film, unexposed or processed.

Magnastripe--An Aid To Magnetic Sound Editing

Magnetic stripe on clear base 35mm film provides matched sound tracks for 35mm films, speeds editing.

By LOREN L. RYDER

Ryder Sound Services, Inc.

IT IS SAID that new tools make the job easier. Magnastripe is just such a tool. It will have many uses; it is already simplifying editorial handling of magnetic sound film.

Stripes of magnetic recording oxide are now being coated on 8 mm, 16 mm, and 35 mm film. It is coated on the base side and can be applied to unexposed photographic print stock, processed print stock and clear base.

This article explains the use and advantages of professional Magnastripe. This is a non-photographic 35 mm clear safety base film with a magnetic stripe 225 mils wide having a center line 420 mils from the edge of the film. A 40 mil stripe is placed outside of the sprocket holes on the side opposite the sound track so as to balance the roll for winding. The placement of these coatings and the dimensions are shown in Figure A; 17½ mm Magnastripe having only the 225 mil stripe will also be available.

The original production recording may be made on 17½ mm or 35 mm full coated or Magnastripe film. In this recommended procedure the print takes are electrically transferred to 35 mm Magnastripe (Figure A). The film is then run through the modulation writer which scribes a visual sound track pattern on the clear area between the sprocket holes and the 225 mil stripe. The modulation writer was described in the April 1951 issue of the American Cinematographer.

The picture and sound dailies are synchronized, code numbered and where necessary crayon marked in the usual manner. The code numbers and markings are also viewed in transparency. Crayon markings should not extend over the oxide sound track.

In line with standard editorial practice the picture and sound film held together can be run through a picture-only or sound-only magnetic Moviola unit. As dual films they can be handled on synchronous rewinds, double head Moviolas and dual film projection. The only requirement is a conversion of the sound reproducers for magnetic reproduction.

For use on most magnetic sound reproducers these films can be spliced on the regular Bell and Howell hot, straight lap splicers with no blooping. This is provided the blades are demagnetized and the heater is changed so as not to remagnetize the blades. If noisy splices do occur, they can be taped out with one to two layers of No. 33 Scotch electrical tape. Generally, the tape is cut straight across and if two layers are required, the ends overlap at the splices. Demagnetizing pencils can also be used; however, they require skill and extreme caution against improper erasure.

The Magnastripe cutting print is also used as the dubbing print. This saves days in time and dollars in film cost. If the sound effects libraries and music are on Magnastripe, they can be set up and handled in the same manner as production films, thus effecting further savings.

After usage, all Magnastripe film can be erased, cleaned and reused. Carbon tetrachloride will remove the modulation writing from the base side of the film. It is not advisable to attempt to record over lap splices, so the film should be broken down into individual rolls which should be classified by length and used individually in the second round of printing.

Professional 35 mm Magnastripe was designed to work with standard magnetic recording and reproducing heads having a 200 mil slit length. It is recommended that these heads be aligned so that the end of the slit shall be 131 mils from the inside edge of the sprocket holes and that this condition shall prevail regardless of the length of the slit in the head.

A paper is to be presented at the October 1951 convention of the Society Of Motion Picture and Television Engineers recommending the above head position. The paper will show that a head alignment and striped film as herein described will give better quality than is now available from the proposed A.S.A. standard for magnetic sound track placement. Magnetic recordings made on the A.S.A. proposed standard will reproduce better under the conditions of this recommended procedure than on the A.S.A. proposed standard. Further, recordings made on the basis of this recommended procdure will reproduce better on the A.S.A. proposed standard than a recording made and reproduced on the A.S.A. proposed standard. In other words, whenever the work and/or equipment used is intermingled between old and new, the result is always improvement and never degradation.

Many people take exception to some of the claims that have been made in regard to the savings effected by magnetic recording and editing. On a picture involving 60,000 feet of production sound recording, 25,000 feet of prints and 7,500 feet release length, optical photographic recording film, processing, printing and a dubbing print will cost $3,700. With magnetic the cost will be $650, the

(*Continued on Page 430*)

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A DOLLY SHOT being supervised by the author for a TV commercial spot announcement. Note plain background and use of simple boom lights for illumination of subject's hair, which demanded visual emphasis.

The Production Of "TV Commercials" On Film

Because of their brevity, TV spot announcements must pack a teriffic selling punch, visual as well as aural. Careful preplanning, therefore is essential to success in this growing field.

By JOHN H. BATTISON

IN TELEVISION, as in radio, preparation of the entertainment part of the program assumes no greater importance—in the eyes of the sponsor, at least—than preparation of his selling message, which makes up part—a very important part—of the overall program. The only reason for a sponsor's investment in fifteen, thirty or sixty minutes of costly TV time is to get his selling message before the vast video viewing audience. To do this, he has, generally speaking, three minutes in every thirty minutes of air time.

The preoccupation with the TV "commercial" means that its presentation and format are not only constantly being improved upon, but ways and means are being constantly sought to reduce the cost of its preparation without reducing selling appeal. The series of articles on TV Commercials, of which this is the first, will therefore deal with the various methods of approach and describe common problems encountered in the production of these valuable—and vulnerable—abbreviated motion pictures.

TV commercials follow set patterns in length, ranging from 4 seconds to a little over a minute. The longest in general use at present is one minute and fifteen seconds. Commercials of this length are generally used on a participating program, where a popular figure entertains for an hour or more, with four sponsors splitting the cost—each "sponsoring" a fifteen minute segment. A good example of the minute-plus-fifteen-seconds commercial is that of Oxydol on the Kate Smith shows.

Next in the assortment of "sizes" of TV commercials are those of one-minute duration. These are normally used at the opening and close of television programs, where there is room for them to be integrated into the program structure. Until a year ago, the one minute commercial was the most popular with sponsors; but the tremendous increase in television's popularity with its consequent increased acceptance on part of advertisers has made it impossible to schedule such commercials at the most



BECAUSE most shots for TV commercials are closeups, extreme care in lighting model or subject is essential to achieve correctly balanced illumination minus the objectional contrasts so detrimental to satisfactory TV transmission of film.

desirable times. As a result, the twenty second "spot" and eight second "break" have become the popular trend.

Although the increase in commercial sponsorship of programs has made it pretty difficult to spot one-minute commercials adjacent to good programs, there seems to be increasing opportunity to use the shorter twenty second spot announcement. Hence their rising popularity. Four- and eight-second announcements are also finding favor when used in conjunction with a brief video picture on the hour and half-hour, when station identifications are made. Such spot announcements skim the cream off the "tune-in" and "tune-out" viewers—tend to catch them coming and going.

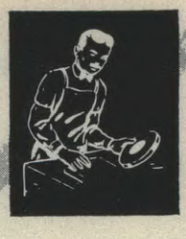
As the length of the TV commercial spot announcement has been compressed, it has brought with it demand for greater skill on the part of the planner and the photographer. It has meant trimming the copy to the bone, so that only the barest of essentials remain—yet ample to "sell" the sponsor's product or service.

Because TV spot announcements created one of the first substantial demands for fresh and continuing film production for television, there was—and still is—a great rush among producers of films into this field. To those about to venture into the business of creating television commercials on film, our advice should be *"don't!"* But, the world being what it is, we'd probably be ignored anyhow; so here are some pointers to remember in creating copy for and photographing TV commercials:

A twenty second spot is *not* an abbreviated sixty second spot. It is rather a message made to measure for its alloted time—or should be. Too often, we find, it is only a rehashed one minute commercial, with the same opening and closing but a different middle. The fallacy here is that in one minute's time, there is ample opportunity to unfold at least a brief story, and lead more adroitly to the selling "punch." But with only twenty seconds of time, the "selling" must begin instantly and sustain itself at high level. Therefore, a good twenty second commercial cannot successfully be tailored from a one minute spot.

The eight second station break is completely different in that there is only sufficient time to establish the product and make the punch line appeal to "buy some soon," etc., before it disappears from the screen. But some very effective selling ideas have been developed for commercials of this length. A clever artist and skilled photography can do wonders to make such brief film strips effective.

(*Continued on Page 422*)



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Announcing

AMERICAN CINEMATOGRAPHER'S
1952 AMATEUR MOTION PICTURE COMPETITION
for the
THE AMERICAN CINEMATOGRAPHER ANNUAL TROPHY AWARDS

Opens: December 1, 1951 — Closes: March 1, 1952

SPONSORED jointly by the American Cinematographer and the American Society of Cinematographers, this annual competition to select the "Top Ten" amateur films of 1951-52 is open to all amateur movie makers residing within the continental United States and its possessions.

ELIGIBLE for entry are 16mm and 8mm amateur-made films regardless of subject, either black-and-white or color, silent, with sound on film, oteur-made film regardless of subject, either black-

AWARDS—The first ten films receiving highest rating in the judging will receive handsome gold American Cinematographer Trophies. The ten next best films will receive Honorable Mention certificates.

RULES

- Entries must be wholly amateur-produced, except for any commercial production of titles, processing of film, or re-recording of entrant's own sound recording.
- All sound films must be wholly amateur-recorded, regardless of sound medium used.
- Film length restricted to maximum of 800 feet for 16mm sound or silent entries; 400 feet maximum for 8mm entries.
- Sound medium (discs, tape, wire) must accompany film in same package.
- Entrants must pay transportation on films and sound records both ways.
- No films should be submitted before December 1, 1951. Both reels and reel containers, and containers of sound medium must bear labels indicating name and address of entrant.
- Entry blank must be submitted in advance.

Write for Entry Blank Today, using Form on Page 430

ANNUALLY, advanced amateur movie makers are afforded opportunity to present their work for criticism and evaluation by the most critical of judges —the professional directors of photography of Hollywood motion picture studios. Again this year, members of the American Society of Cinematographers join with the editors of American Cinematographer to select the Top Ten amateur motion pictures of 1951-52 from among the entries to be submitted in American Cinematographer's Annual Amateur Motion Picture Competition.

To the winners—the Top Ten—go handsome gold American Cinematographer trophies, and for the runners-up, there will be attractive Honorable Mention certificates.

Amateurs striving for perfection in their camera work and those who engage in amateur ciné photography in a serious way, should find in this annual competition incentive in worthwhile and purposeful picture making. And when your film is cited by a professional, as in this competition, you have reason to feel that your work is well above the average, and that it shows professional promise.

Obviously, this is not the competition for the beginner's family films or those films not fully planned and completed. It offers instead a competition on a higher level, aimed at helping the advanced and more serious worker. The beginning amateur must not construe this as intentionally discouraging his efforts; all cine cameraists once were beginners; but only those films which display serious effort in the planning, photography and editing can receive consideration in the final judging.

The basic rules of the competition

(*Continued on Page 424*)

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Technical Teamwork

Film made by non-professionals for local Cancer Society points way for other amateur cine clubs interested in group production of worthwhile films.

By WILLIAM MESSNER

Photos by George Labes

COLLECTIVE FILM MAKING has been the interesting subject of articles by Alvin D. Roe, which appeared in the July and September issues of American Cinematographer. In these articles, Roe has endeavored to probe the reason for what appears as widespread laxity—or declining interest—on the part of many American amateur movie makers, and has suggested that, as a means of rekindling this interest and opening up new horizons of activity for the amateur, serious cine cameraists undertake to work collectively with small groups of associates with similar interests, in the cooperative enterprise of producing worthwhile films—a movement, incidentally, to which American Cinematographer has long been dedicated.

That this premise is on sound ground is evidenced by the fact many amateur cine groups already have been working together, producing films for civic and charity groups which otherwise might not enjoy the benefit of motion pictures as a means of furthering their cause.

It is therefore timely that we observed in the Summer, 1951, edition of the Bolex Reporter, William Messner's article which describes how he and a group of amateur movie maker associates pooled their technical talents to produce a film for the Bergen County (New Jersey) Chapter of the American Cancer Society.

Because this story points up the theme which Alvin Roe has set forth so admirably in his recent articles, we are reprinting William Messner's article below, thanks to the kindness of Thomas Elwell, editor of Bolex Reporter.

—*Editor.*

THE TECHNICAL difficulties in the making of "Why Should I Fear Cancer," a documentary film on cancer and cancer detection, that I had the honor to direct, were many and varied.



AUTHOR William Messner examines one of the three Bolex cameras his group employed in shooting "Why Should I Fear Cancer?"

It all began when Miss Armstrong, executive director of the Bergen County Chapter of the American Cancer Society, approached the Amateur Movie Society of Bergen County, of which I am a member, and asked our Society to take on the job of making a 16mm film to show the chapter's specialized services to the public viz., channeling people to their doctor in time, clinical work and free medicine, dressing and home care, nursing treatment and terminal care.

Earlier films of the Cancer Society's national program seemed to emphasize a thread of fear, whereas locally cancer fighters had turned to talking in terms of aggressive action and hope. So a film patterned more on the County's own aims was decided upon.

Inasmuch as I had just won a prize for producing one of the Ten Best amateur films for 1948 in a contest conducted by the Amateur Cinema League, I was asked to take on the job of producing and directing the film. Pictures of such magnitude demand more technical attention than one man alone can give to them. The answer, of course, was to organize a group of associates to assist with the production. I chose for my "crew" George Labes, cameraman; Gene Huebler, lighting technician; and, because this was to be a sound production, Dr. Rudolph Van Gelder served as sound technician.

A straight narrative story was written by William A. Caldwell, assistant editor of the Bergen Evening Record, a county daily with a circulation exceeding many of the leading newspapers of some of our great cities. The plot has to do with a young banker who worries about a lump on his leg and just keeps letting it go. Carried along with this story is that of a Hudson river barge captain who, likewise, ignores a lump on his leg, but the Captain winds up in a nursing home with a full blown cancer.

Capt. John's side of the story tells how the Bergen County Chapter's treatment and care services work; the young banker's story shows how educational and detection programs can catch cancer in time, or banish fear of it. The banker comes out all right. The story had to be rewritten and adapted to a combination shooting and narrative script. Each scene had to be figured out, set down in logical continuity order, narration fitted and timed to each scene. After many nights of sweating it out we were ready to shoot.

Calling on the Bergen Players, a popular theatrical group, my good friend Ray Meilbrecht offered to take the lead. Miss Armstrong played herself; Miss Ming, Steve Hand, nurses, doctors, bandaging groups and volunteer ambulance groups, police officers and welfare workers rounded out the cast.

Because we decided to shoot the film on commercial Kodachrome, we had some difficulty getting adequate lighting, as this film is slower than regular Kodachrome. For instance, in one scene where we have the cancer specialists huddled

(*Continued on Page 414*)



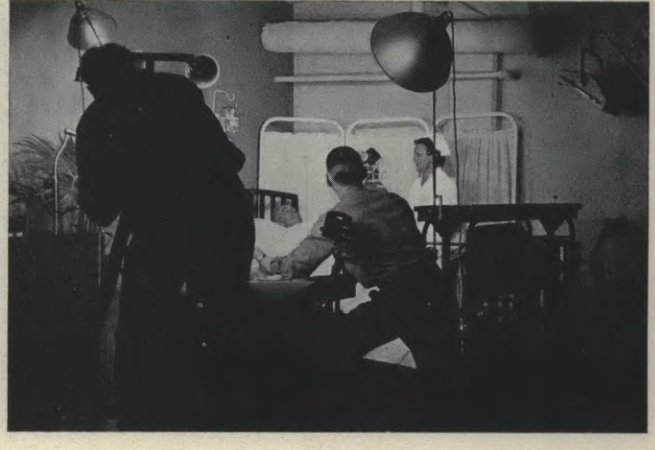
TRUCKING shot of actor's feet to be superimposed over shot of a clock face, required critical timing and real teamwork on part of amateur crew. Girl in foreground is watching frame counter on camera while actor synchronizes his steps with metronome (shown in foreground). Later it was necessary to retake the scene, with actor keeping proper distance between camera and feet by holding taut a string stretched (outside camera range) from his fingers to camera dolly.

PHOTOFLOODS and reflector-floods supplied ample illumination for most interiors. Here William Messner directs a scene staged in the Cancer Society offices. The picture was shot silently in 16mm Commercial Kodachrome. Narration, recorded on magnetic tape, was added later.



BELOW: (Left) Scene showing diagnosis being made of man suspected of cancer affliction. (Right) Shooting scene in actual hospital. Here line voltage was too low to furnish ample power for the desired number of photoflood lamps; required shooting with lens wide open, using fewer lamps.



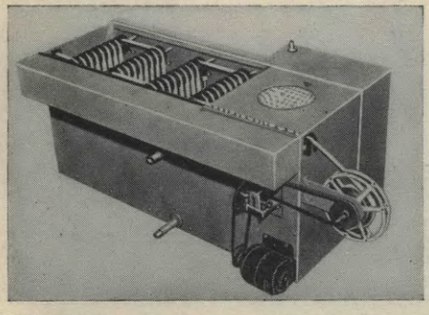


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BARGAINS GALORE in the Classified Advertising Pages of this Issue!

TECHNICAL TEAMWORK

(Continued from Page 412)

over Captain John (the character in the story who was a retired barge captain, with a suspect lump on his leg), we just couldn't seem to get enough light from the regular power lines. This scene was actually taken in the hospital; the line voltage was so low, that when we turned on the number four photofloods to supplement six number two photofloods, the lights actually turned red; so we had to cut down on the lights and shoot with the lens aperture wide open. We didn't want to shoot at this setting as we knew the picture would get too soft—but we couldn't do otherwise.

Another problem arose in a scene in which Meilbrecht, the star, was walking along the street toward the Cancer Society's headquarters. (I should explain that the previous shot showed him coming out of his office building.) The sound of a clock ticking off the seconds —the theme being "time is life"—had to be dubbed on the sound track later with the star's steps in synchronization with the second hand of a clock. As the seconds "ticked off" by the clock being filmed, we had to set up a metronome so that he could *hear* it "tick" and keep in step with the second hand.

From this long shot of Meilbrecht's walk from his office, it was decided to show a closeup (we had to make a special dolly) of his feet along the pavement. To keep the proper distance between camera and feet, our genius, cameraman Labes, came up with the idea of using a string six feet long, one end held by the actor and the other end fastened to the dolly. As the dolly was pulled along the sidewalk the actor judged the length of his steps by keeping the string taut, so that he was always six feet away from the camera. All this time, he took his timing for every step from the metronome which was set at 120, registering a click every one-half second.

For this superimposition we filmed the clock first—set the frame counter on the Bolex—and shot enough footage (timing predetermined in the script) and then wound the film back to the beginning of the clock scene for the shooting of the scenes mentioned above.

One sequence shows a patient at the cancer headquarters inquiring what he should do about a lump on his leg. He becomes disturbed with all the activity and the seeming disregard of his troubled mind. To show this activity, a diagonal split image shot was planned. A masking device was clipped on the front of the lens and set to that the frame was split from the upper left to the lower right (diagonally). First it was placed so that the right angle was masked out. The viewfinder was also masked off with tape in order to insure that, when looking through the finder, all of the action wanted would be in the scene; the frame counter was set so that the other side of the split image could be matched on the frame when the film was wound back and the other half taken. A cancer society employee was shot making 'phone calls to patients—we filmed a semicloseup, an extreme closeup and then back to semicloseup. When sufficient footage was taken, the film was wound back to the start of the scene, then mask and tape were transferred to the other side of the diagonal. The shots on this side of the frames included a hospital nurse answering a telephone call and an ambulance pulling up to load and unload patients. This effect served a dual purpose—showing the society making arrangements and then these arrangements being carried out, all on the same frame.

The story also called for the showing of different medications. To lend dramatic impact the different bottles and boxes were set up on black velvet, and the Bolex zoomed from three and one-half feet to one and one-half feet depending on the sizes. The effect is as though the medications come from out of nowhere to practically fill the frame. Each one was zoomed separately and filmed long enough to read the labels.

When the script called for a sequence on X-ray therapy, another trip to the hospital was made. These scenes were shot, when the X-ray room was particularly busy, and we had to remove the

NEXT MONTH

Gordon Malthouse, editor of **Amateur Cine World,** Great Britain's popular publication for the British amateur movie maker, has written a special article of interest to American Cinematographer's cinefilming readers, which will appear in our November issue.

Prompted by the views expressed in recent issues of A.C. by Alvin D. Roe, Mr. Malthouse's article will deal with still another factor vital to the success of the amateur—the public showing of his films.

"It is not merely that good amateur films deserve an audience," says Mr. Malthouse. "They **need** it."

Read his absorbing and provocative article in

NOVEMBER

American Cinematographer

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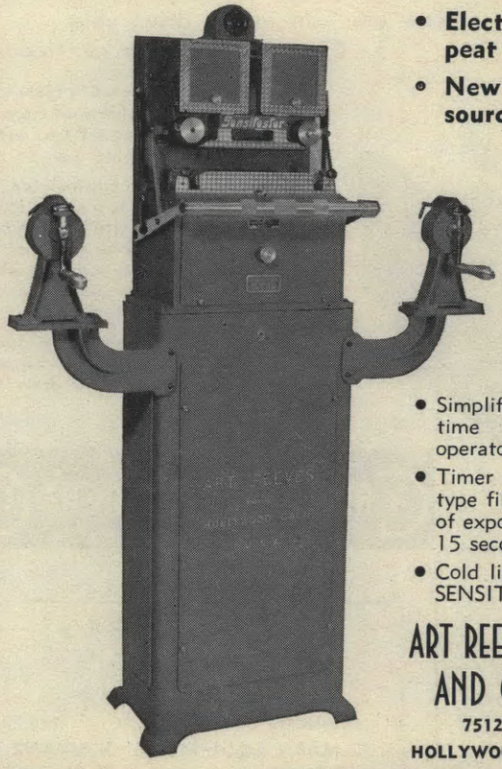
camera from the room whenever the machine was on, to keep the film in the camera from being fogged by radiation. We had Captain John on the X-ray table and had the technician go through all the steps of X-ray therapy treatment.

When the actual shooting was finished it was thought that the bulk of the work was behind us—but we soon learned differently. Each scene was carefully cut and marked. It was then checked with the narration for length, etc. Fadeins and fadeouts were decided on and where we didn't fade in the actual filming (with a Boole fader) chemical fades were made by hand.

The shots were then edited and spliced together, checking continuity constantly. A black and white work print was then made so that the original commercial Kodachrome wouldn't be damaged by further editing or projection. The black and white print was then screened and the narration timed. The film had to be re-edited at times for better fitting of the narration, the narration changed where necessary and the film properly paced.

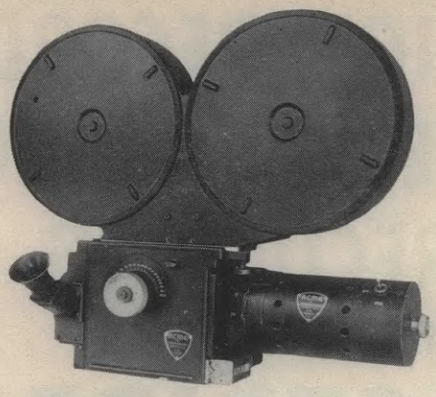
Then came the selection of appropriate music for background. Many more nights were spent at Dr. Van Gelder's sound studios. A narrator did the commentary using a tape recorder; Dr. Van Gelder mixing in the background-music

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from two turntables, while I cued the narrator so that the narration fitted in place. From this tape recording George Labes made an optical sound track and then a combination finished print was made.

So — after eight months — a 16mm color sound film taking twenty-two minutes to screen had its premiere.

My Bolex proved the champion that it really is, its versatility and performance helping to make the actual shooting of this picture a pleasure. The fact that George Labes, Dr. Van Gelder, Ray Meilbrecht and myself are proud owners of Bolex H-16 cameras bears out this conclusion.

AMPEX RECORDER

(Continued from Page 404)

top plate assembly is mounted on either the console cabinet or portable case, they are conveniently located along the front edge. The push-button controls for STOP-START-RECORD are relay-operated and may be remote controlled. Stopping of tape movement is almost instantaneous. When playing or recording at 15 i.p.s., the tape moves less than 2 inches after stop button is depressed.

The final production design of the recorder's electronic assembly was preceded by considerable development work, the purpose of which was to simplify all components and reduce both cost and size. The record amplifier takes signal from the microphone or radio input directly to a bridging input transformer or in the optional form with a matching input transformer. There are three stages of amplification, affording sufficient gain to operate from a line level as low as —30 volume units. Overall performance characteristics fall well within the proposed NAB standards. Frequency response is plus or minus 2 db from 50 to 15,000 cps at 15 i.p.s. and plus or minus 2 db from 50 to 7,500 cps at 7½ i.p.s. Signal to noise ratio is better than 60 db.

Other features, no less important, include monitoring jack that provides for direct monitor of record input signal before or during recording, and monitoing of recorded output signal from playback head; pilot lights on panel for indication of power and recording status; positive reel locking hubs; and the three magnetic heads in a single shielded housing.

The Ampex is a product of Ampex Electric Corporation, San Carlos, Calif. Prominent among users of Ampex Recorders in Hollywood, is Bing Crosby Enterprises, Inc., now west coast distributors for Ampex equipment.

QUO VADIS

(*Continued from Page 399*)

Arthur Walge, who was found after a lengthy search among the habitues of Santa Monica's famed "Muscle Beach." Peter Miles, tested in Hollywood, was given the role of Nazarius.

In April of 1950, Dore Schary gave the signal that started actual production of "Quo Vadis" on its way. I had just completed the photography of "King Solomon's Mines," and within a week John Schmitz, my camera operator, and I were flying the Atlantic, bound for Rome and Cinecitta.

The morning following our arrival in Rome, we drove to the Cinecitta Studio for a first-hand study of the photographic problems that lay before us there. I was at once astounded by the immense amount of work that had gone into the preparation for the production. Never before had I seen such large and beautiful settings for any picture. Art director Horning had accomplished wonders in the face of tremendous handicaps and the difficulties of inexperienced Italian labor. Here, Horning without experienced construction department men had to supervise the driving of virtually every nail and every stroke of every paint brush in the hands of willing but untutored Italian workers. It had been a feverish day-and-night job, and the cost item was just as important as though we were making a "B" picture, instead of the most expensive motion picture ever produced.

Two unpleasant surprises were mine upon viewing our sets that morning. First, it would be impossible to use overhead light platforms. The stages, walls and ceilings were in such bad repair they would never be able to hold the weight of heavy arc lighting equipment. This meant all light decks would have to be supported from the floor. Then, as a matter of course, it followed that none of the set walls could be made "wild," because they, too, would have to help support my equipment.

The second surprise was the set for the Roman banquet scene. This setting was so vast that none of the regular Cinecitta stages was large enough to contain it. Also, we did not have enough lighting equipment to properly illuminate it for Technicolor.

As a last resort, art director Horning had the set constructed on Cinecitta's stage 15, which consisted of four walls and no overhead roof whatsoever—the war had interrupted its completion. But the situation had its good side, too. It enabled us later to augment the illumination of the vast set with sunlight.

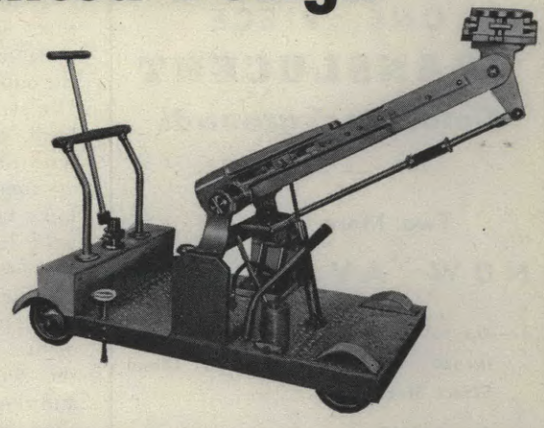
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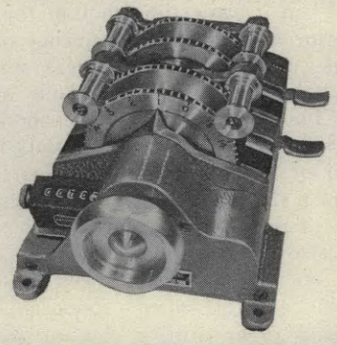
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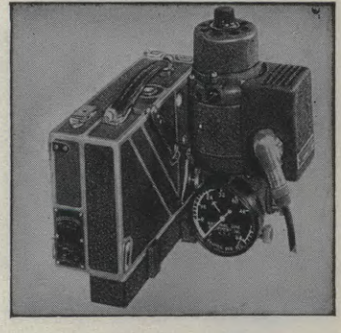
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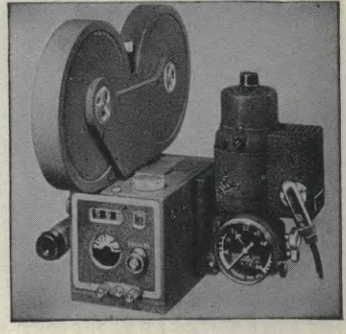
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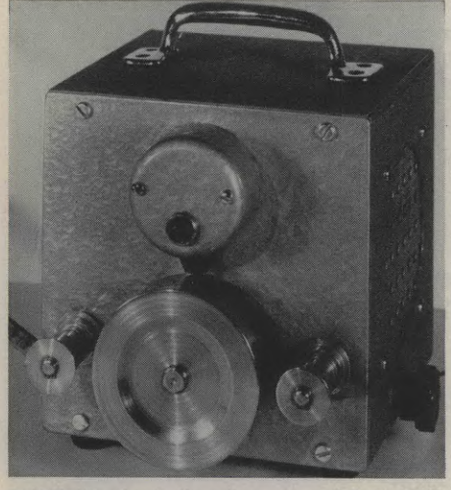
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executive director of photography, and the late Charles Schoenbaum had made extensive tests with this type of lighting, and the net result of their findings was of vast help to us later when lighting and photographing Nero's banquet scenes.

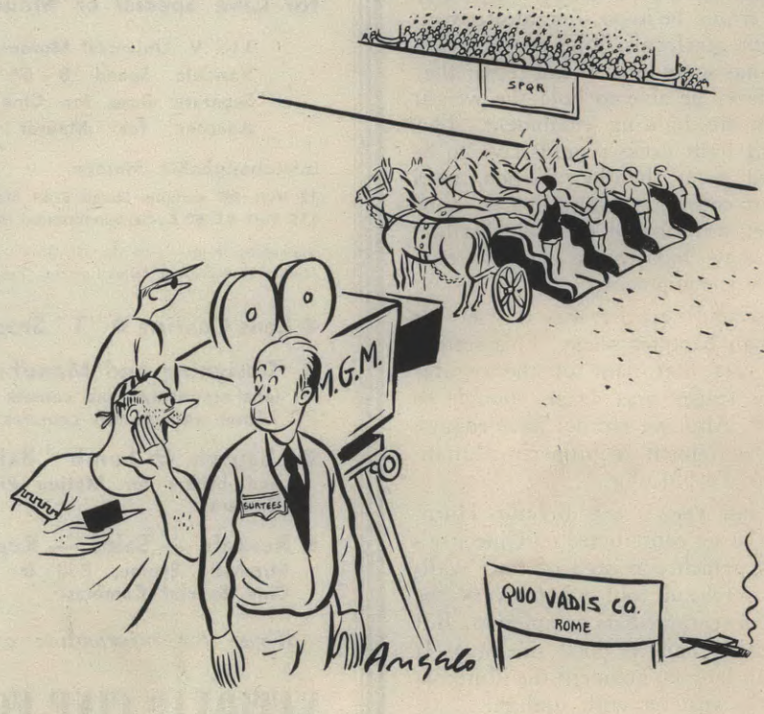
I added one or two innovations to their system, however, which made it possible to maintain greater control of the sunlight falling on the roofless stage. We stretched two sets of diffusers overhead, one on top of the other, so that, with the aid of about thirty men pulling on ropes, we could vary the amount of light falling on the set. We found that wild light alone would measure about 400 foot candles, which was about twice that needed to supplement the illumination from our artifiicial lighting equipment. Thus, by varying the density of the overhead diffusers, as the sun rose and then gradually descended toward the close of day, it was possible to maintain a fairly consistent value of 200 foot candles in the daylight falling on the set.

When it came time to film the night interior extreme effect sequence on this stage, again we found there was too much daylight splashing about on our set. This was especially true on the top of the walls, where the diffusers spilled most of the light from the outside. To correct this, Horning had the topmost part of the walls painted a darker tone; we also eliminated one diffuser, dyed the one remaining a deep blue-grey color, and resumed shooting. This worked great until a day or so later when a rainstorm occurred, causing unsightly streaks of blue dye from the raindrenched diffusers to mar the set walls. Also damaged was much of the furnishings and expensive draperies. Thus, Nero's banquet set goes down in my book as the first *interior* I ever worked on where we photographed, "weather permitting!"

Horning had his problems in set construction, too. The lumber shortage in Italy, lack of skilled woodworkers, and the tendency of the limited lumber stocks to warp, all contributed to making his already enormous task an extremely tough one. The warping of wooden floors was remedied by substituting cement for wood. But the problem continued in the construction of the vast Arena set, made to seat more people than Los Angeles' Gilmore stadium, and in the construction of the gigantic bridge, over which 5,000 people were to be filmed as they made their way across it in their escape from burning Rome.

The exterior of Nero's Palace was an immense set capable of holding a crowd of 10,000 extras. The forecourt was cement, beautifully decorated to simulate mosaic. Six 50-foot statues of various Roman Gods were erected on pedestals on the raised platform. The colors of the building, and the mosaic designs in the forecourt all had been selected with an eye toward blending satisfactorily with the custumes of the players. At the rear, overlooking the set, a hundred-foot steel construction tower was erected which we used for making elevation shots with the camera.

These and other unusual camera



"Who do you want in this race?"

NO WAY OUT

Stretched out on his psychiatrist's couch, an actor pleaded, "Doctor, you've got to help me. I'm having a tough time. My director says I can't act; my cameraman is having trouble photographing me; the soundman says it's difficult to hear me. As a matter of fact, I also have difficulty remembering my lines."

Psychiatrist: "My advice would be for you to quit the picture business."

Actor: "I can't. I'm a star."

—*Variety*

angles had been charted and agreed upon during the various set design meetings held earlier in Hollywood. The perspective drawings made by Cedric Gibbon's art department were used as a guide whenever lining up our camera setups. We were not required to follow these implicitly, which permitted us the latitude of watching for and utilizing improved camera angles, where possible. We were ever alert for making improvements over our basic plans.

Edward Carfagno, joined Horning later to assist him with his task of set construction supervision. Here mention must be made of what was probably the art department's most outstanding contribution—the construction of an entire Roman street, complete with homes and shops of two thousand years ago. Other construction accomplishments included the building of 100 additional interior sets, which required the services of 500 carpenters for a period of over two years. Sculptors took over one complete sound stage where they designed and moulded more than 500 pieces of statuary used in decorating the sets.

Costuming was a major undertaking. Designer Herschel McCoy and his staff were continually swamped with work in making custumes. This required the utilization of still another of Cinecitta's sound stages for the manufacture and storage of costumes. Another stage was divided into sections where a dry-cleaning plant, a laundry and a shoe repair shop were set up.

So vast was the costuming job, McCoy sought outside assistance in making the costumes; but there were not enough companies in all Italy capable of turning out the tremendous number of costumes the production required. McCoy finally contracted much of the work through agents who parcelled it out among housewives in and around Rome. The combined project consumed more than 52,000 yards of materials, resulting in more than 32,000 costumes. Turned out by hand were more than 15,000 pairs of sandals, 12,000 items of jewelry, 4,000 helmets of brass, aluminum and tin, 4,000 breastplates, 2,000 shields, and 21,700 water bottles.

Novel shortcut methods were devised in the issuing and checking-in of costumes for the thousands of extras. When we worked the Arena set, 14,000 extras would have to be outfitted, and at the close of the day's work, all wardrobes had to be turned in. During the night, these were cleaned, repairs made where necessary, and all made ready for use again the following day. Besides the mechanics of issuing and retrieving costumes daily, McCoy's greater problem concerned the colors in the costumes. Here the technical requirements of the camera had to be considered as well as the pictorial composition of the photography. The rushes were carefully studied each day to make sure we were not getting too many people in blue or red uniforms in clusters in the vast assemblages. To avoid the problem of too many red-dressed players grouping together inadvertently in a scene — which would create a strong distracting factor — the red costumes were dyed in various shades of red, so that there would be little likelihood of too much of any one color tone appearing in any one spot.

(To be continued next month)

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THE ACME PROCESS CAMERA

(Continued from Page 401)

interchangeable within the accuracy of 0.0001 inch. This makes it possible to use supplementary movements with the various register-pin locations. Also, this selectivity and interchangeability not only provide film movements which coincide with the optical printer and/or production camera, but also facilitate and augment the bipack methods presently employed for special effects and two-color photography.

The feasibility of the supplementary movements is best emplified in the emulsion-to-emulsion printing of two-color bipack negatives to the separation positives, and subsequent process shots from these positives. In such operations, because of film shrinkage and inaccuracies of the perforations, it is essential to register consistently with the same "full-fitting" perforation as well as the same pair of perforations as used for the original negative. Those who have used bipack photographic methods know that when the two films are simultaneously exposed in the emulsion-to emulsion superimposed manner, the "full-fitting" register pin locations of the two records are opposite from left to right, in relation to the emulsion and image. Therefore, the advantages of supplementary film movements with "full-fitting" register pins which coincide with the oriented bipack records may be readily appreciated.

Figure 2 illustrates the locations of the register pins and the left-to-right image relation of three-color, three-strip negatives. Again, as in two-color, the locations of the "full-fitting" perforations are reversed due to the emulsion-to-emulsion operation of the red and blue records. In the lower part of Fig. 2, the three records are viewed from the emulsion side and it may be seen that the registration perforations of the blue and green records correspond, and the red record is dissimilar.

The viewing device of the camera is of the positive reflex type. This enables operator to view the image, as seen by the camera lens, without shifting or "racking-over" the camera. To view the image, a lever on the camera is actuated to position a 45°-angle, first-surface mirror between the lens and the photographic aperture in the camera. The image is thus diverted to a ground glass, and is seen magnified about two times, and erect and correct from left to right. A notable feature is the safety device which prevents the camera mechanism from operating while viewer is employed.

Within the viewer are two register pins, which are in exact optical alignment with the register pins of the film movement. Thus, by placing a piece of processed film on the register pins of the viewer, a matte shot view or a composite view of the objective scene is obtained. This assures exact composite alignment and registration during future printing operations.

A special arrangement of the viewing tube, which allows it to be removed and a lamphouse substituted, makes it possible to mount processed stock on the viewer register pins and project the image through the photographic objective. A matt may then be painted from the projected image. The raw stock in the camera is not exposed in the process. Thus, because of the exact optical alignment obtained between the register pins of the movement and register pins of the viewer, composite alignment of original scene and matt shot is assured during the bipack printing operation.

Mitchell Camera Mentor

•

INAUGURATING a program of assisting cameramen to use Mitchell cameras and equipment with maximum efficiency, Mitchell Camera Corporation's Charles Austin is currently speaking before groups of professional cinematographers throughout the country. Service also is being made available to technical schools and colleges teaching motion picture techniques, through Theodore Altman, Mitchell's eastern representative in New York City.

•



The camera is equipped with a 75mm Ektar enlarging lens, although other lenses of different focal lengths may also be used. The size and location of the reflex viewer preclude use of lenses of shorter focal length. The minimum focal length lens which may be used is approximately 62mm.

Between the aperture and the lens, a color wheel is built in that contains the necessary ND and color filters for three-color, successive frame photography. This wheel rotates synchronously with the camera shutter and places, in sequence, the blue, red and green filters in front of the film during the three successive-frame exposures. When the camera is to be used for black-and-white photography, the color wheel is retracted by means of a lever at the front of the camera; this also is the only operation required to reconvert the camera to successive-frame color photography. Because of the different requirements of 16mm photography, the color wheel of the 35mm model is omitted on the 16mm camera.

Other features include a footage and frame counter in one resetable unit; a variable shutter adjustable from 0° to a maximum opening of 170°; and an optional automatic shutter device which produces selective fades of 1-, 2-, 3-, 4- and 8-foot lengths. A unique gearing and linkage arrangement closes and opens the shutter at a semilogarithmic differential. Thus, when closing, the amount of shutter variation between successive frames gradually decreases as the shutter approaches the closed position. The variation operates inversely when opening.

A gear-driven automatic takeup for the film magazines, which operates both forward and reverse, completely eliminates belts, pulleys and manual operations when changing the direction of film travel. Drives are available for use with either 400-foot or 1000-foot capacity film magazines. The conventional pulley-and-belt type takeup is available for bipack magazines. This is mounted on the camera case in the same manner as the automatic magazine drive and is interchangeable with it.

Takeup failure is automatically checked by a buckle switch which instantly stops camera motor when failure occurs. Removing the film buckle, by manually rotating the magazine spindle, automatically resets the buckle safety switch.

Two types of motor drive units are available for use with the camera. They are (1) the variable speed synchronous drive motor featuring synchronous operation at various speeds, and (2) the stop-motion motor for single-frame exposure. Both motors operate either forward or reverse. Speed selection is obtained by shifting gears of the interconnecting transmission. The speeds of 24, 16, 12, 6, 3 or 1.5 frames per second are provided with the synchronous drive motor. Selective speeds or exposure times are also provided by the stop-motion motor. A range of ¼, ½, 1, 2 or 4 seconds exposure is provided. Also a 1/16 second exposure for rewinding and straight title work is provided, although this operates continuously only.

The stop-motion is actuated by a remote, portable pushbutton switch, which produces one exposure at each operation of the button. For three-color, successive-frame, animation photography, a selector switch is provided which changes the ratio to three exposures each time the switch is pressed.

The camera, which was described for the first time in a paper presented before the Society of Motion Picture and Television Engineers early in 1950, is a product of Producers Service Company, 2704 West Olive Avenue, Burbank, California.

The foregoing article is based upon a paper by the same author which appeared in the May 1951 *Journal of the Society of Motion Picture and Television Engineers*.—ED.

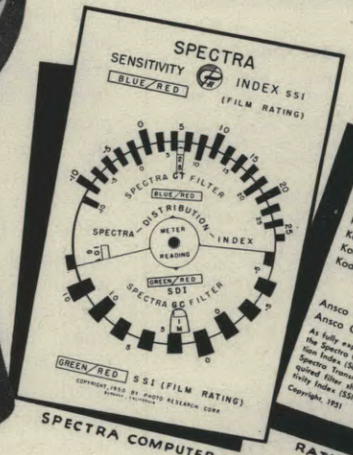
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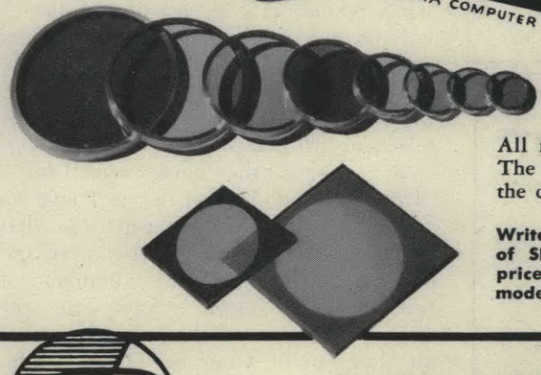
The only meter that has the two scales—BLUE/RED and GREEN/RED and is calibrated to read directly in the new Spectra Index Units (Table is supplied to convert Spectra Index into Kelvin Units)



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CT (Color Temperature) GC (Green Correction)

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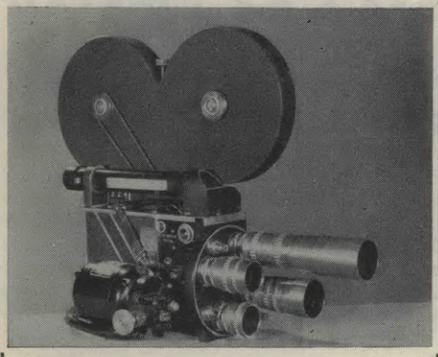
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for Mitchell Standard, N. C., and Bell & Howell 35mm. cameras. Showing TV alignment — outlining active receiver area, and Academy (sound) aperture.

Write For Details

CAMERA EQUIPMENT COMPANY
1600 Broadway New York, N. Y.

PRODUCING TV COMMERCIALS ON FILM

(Continued from Page 409)

Regardless of the length of the TV commercial, planning should take into consideration that there must be two seconds less of sound than the nominal length of the film. Thus, a one minute commercial will have 58 seconds of sound and sixty seconds of picture; an eight second station break, six seconds of sound, and so on. The silent "area" is divided as follows: 1½ seconds at the opening of the film, and ½ second at the end.

These silent portions of the film have become standard procedure. If the reader will consider the physical relationship between the picture frame and position of the corresponding sound on the sound track—26 frame differential for 16mm, and 19/20 frame lead in the case of 35mm—it will be seen that in order to have sound with the opening frames of the brief commercial film, it would be necessary for it to appear in the blank leader. From purely operational considerations it would not be possible to insure that the projectionist would always be able to transmit the first part of the sound track. For the same reason, at the end of the film a half second of silence is left to prevent any abrupt cut in audio when the switch-away from film is made. Watch for this the next time you are looking at your television programs.

By closing the commercial on a "freeze frame" — that is, a frame in which there is no movement (so that the one frame may be printed over and over again an indefinite number of times) — it is often possible for the sponsor to get more than one minute of air time out of a one minute spot film. Quite often there is a slight delay on switching over from film, and if the film is still running on an already well established shot, there is a double impact and the advertiser gains a few seconds air time at no extra cost. Thus, spots are rarely cut to exactly the allotted length, and most have extra frames at the end.

It is essential that quality of the commercial spot film match that of the program; and yet, how seldom does this happen! Where the spot is inferior, invariably it can be traced to poor film equipment operation, a poor film print, or both.

There are two schools of thought on the question of release print gamma. One, to which the writer belongs, holds that the laboratory should print its release positives two points lighter than theatrical prints—i.e., about 2.3 gamma. This produces a finely graded print, which is not too dark and does not produce the secondary emission in the iconoscope camera tube which causes those "clouds" so often associated with televised films. As a matter of fact, keeping a firm check on this release print gamma contributes toward greatly satisfying the sponsor.

Thus, it can be seen that careful preproduction planning of TV commercial films pays off handsomely, just as it does with successful theatrical films. By going into production with every detail planned not only will save time, film and lights, but lessen, if not eliminate entirely, the possibility of rejects of your product on the part of sponsor and advertising agency.

Next month we shall deal with the planning, production and cutting phases of TV commercial films.

RESOLUTION TEST CHART

(Continued from Page 402)

commercial methods could be used, and a great saving in time and cost was thus effected.

From these preliminary considerations it was decided that a suitable test chart should (1) supply most of the required information on a single photograph made under specified conditions, (2) give direct comparison of focal sharpness at the center and in each corner by having similar figures in these positions, (3) give information on resolution in terms of lines per millimeter under contrast comparable to that in the commonly used National Bureau of Standards test charts, (4) give results with a minimum of auxiliary equipment and with a minimum of calculation, (5) give resolution on limits at various points in the field of the lens, (6) indicate the lens defects which contribute to these limitations, (7) have enough symmetry about its center to reveal any mis-centering or mis-alignment of the lens elements. The chart is reproduced in figure 1. It will be noticed that the same "focus figure" appears at the center and at each of the four corners. This makes a rapid comparison of corner to center sharpness possible. Near each figure are several sets of wedges, designed to assist in visual analysis, and to indicate resolution when the chart is used at a considerable distance from the lens. Along the diagonals are small circles of uniform diameter, black circles against the white background along one, white circles in a black field along the other. These indicate coma and also permit a study of film characteristics. Rectangular sets of lines near each of the edges are useful in aligning the chart and testing for steadiness of motion pictures. The margins of the

chart, however, are exactly marked by the eight triangular "points." When the chart is mounted at a distance from the lens in inches equal to the focal length of the lens in millimeters (more precisely at 26 times the focal length), the images of these points will outline the standard (Academy) aperture.

Resolution limits are obtained from the eight pairs of resolution patterns located at selected positions. Two pairs are found near the outer edges of the horizontal central wedges, four are located along the diagonal lines, and the other two pairs are near the outer edges of the chart. It is also possible to read resolution values from the focus figures, using scale values supplied in the directions furnished with each chart.

The focus figures located at the center and at each corner are shown in greater detail in figure 2. These were designed to facilitate maximum sharpness of focus with the chart at any reasonable distance from the lens, and also include resolution patterns so that resolution in each of these positions can be determined. The basic design consists of circular and radial elements of differing widths. The heavy cusped figure can be seen at long distances and can be used to obtain a maximum sharpness of focus when finer detail is not visible. Ordinarily the white center will be visible, and under moderately favorable conditions the black dot will also appear. The fine black cross lines will appear only under very favorable conditions with the image in very good focus. The concentric circles and radial lines indicate the resolution limits, and scale values for each set are provided with each chart.

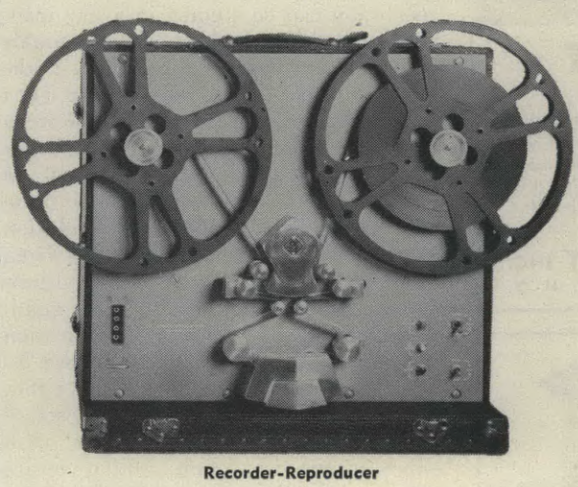
The resolution patterns, shown in detail in figure 3, were designed after careful consideration had been given to the NBS charts and also to alternative designs suggested by the Air Force and by other agencies. It was decided that the three-line pattern was the most desirable since it gave the limiting readings without any necessity of counting the number of lines. At a distance from the lens of 26 times the focal length of the lens, the scale values accompanying the patterns read directly in lines per millimeter, and at other distances can be used in a simple formula to give the lines per millimeter resolution, thus reducing necessary calculations to a minimum.

These patterns are placed approximately one-third, one-half and three-quarters of the center to corner distance. For most lenses the closer sets will give approximately the maximum resolution, the half-way sets will give good mean values, and the outer ones will be near the position of poorest resolution. Each pattern is drawn so that its lines are either radial from the center of the chart or approximately tangential, making it possible to read both radial and tangential resolution without any mixing of the two values. Each pattern has a symmetrically placed one nearby, and each pair has another pair placed symmetrically with respect to the center of the chart. This allows a multiplicity of readings which reduce possibility of error, and provide a check on lens defects.

While it is not often that the chart may be used to make a complete analysis of lens aberrations, it can be used to study them, and various common lens defects are quickly revealed by it. For example, a difference in the sharpness of focus of the center and corner figures indicate a curvature of field. A difference in size of these figures on the photographed object indicates distortion. Coma will be apparent from tear-drop shapes of the circles along the diagonal lines. Astigmatism can be analyzed from the differences in values read from the radial and from the tangential resolution patterns and from a difference in sharpness of the radial and circular lines

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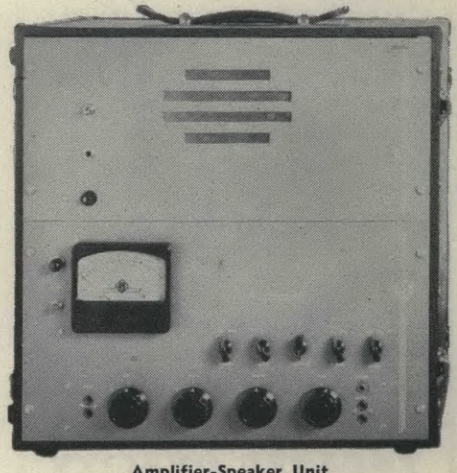


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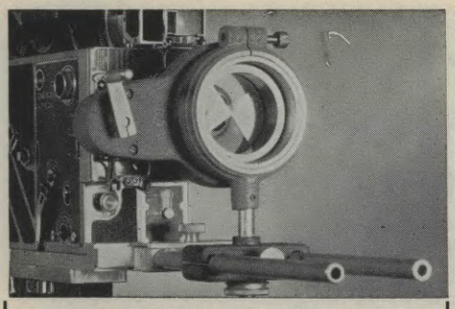
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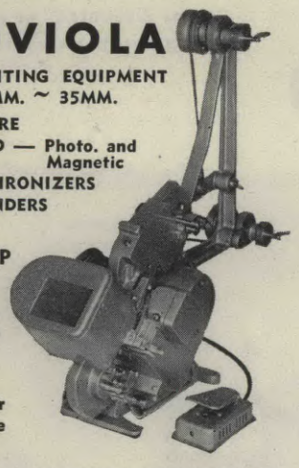
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in the focal figures. Spherical aberration can be analyzed by use of the central focus figure with the chart carefully centered on the optic axis of the lens. The shift in lens position required to maintain sharp focus as the lens aperture is reduced from full open position to the finest opening which still gives a recognizable image indicates the seriousness of this aberration. Chromatic aberration can be studied in a like manner, using the central figure and suitable color filters. Faulty alignment of the lens in its mounting is evidenced by a difference in sharpness of focus between the corner figures. Mis-alignment or mis-centering of lens elements will be revealed by a difference in resolution read from symmetrical pairs of resolution patterns at corresponding distances from the center. Thus most of the important defects in a lens will be revealed qualitatively and some quantitative indication of their seriousness can be obtained by using the scale figures which are either on or supplied with the chart. A set of directions for the use of the chart with either 35 mm. or 16 mm. motion picture cameras or with any type of still camera has been prepared.

1952 ANNUAL COMPETITION

(*Continued from Page 410*)

appear above. Contestants are urged to read them carefully before submitting their films.

It is with great reluctance that American Cinematographer is compelled to eliminate from the competition this year, entries from outside the United States. This has been made necessary by the difficulties encountered in receiving foreign-made films through U.S. customs, and returning them later through the same channels. The foreign amateur is making some of the best cine films, and we shall miss his contributions greatly in this year's competition.

The opening and closing dates of the competition were purposely planned to afford amateurs opportunity to compete in other national contests, and have their films back in plenty of time to enter them in American Cinematographer's competition.

Films which have won awards in other national contests are also eligible in this competition, but films which were submitted in a previous American Cinematographer competition should not be re-entered.

The fact one entry is a sound film or has sound on a separate medium does not make it a more important entry than a silent film. All entries in this competition are judged basically on the photography—the way the picture is presented photographically—with all other factors having a secondary value, and all contributing to the overall evaluation. In other words, a film that is mediocre photographically, is not saved by sound. On the other hand, a well-planned and executed sound track contributes to the value of the *overall effort* put into the picture.

Readers planning to enter films in the competition are urged to clip the form on page 430, fill it out and mail it to the contest chairman today, in order to receive official entry blank.

UNINHIBITED CAMERA

(*Continued from Page 400*)

to emerge as a photographic *tour de force*.

The camera treatment and lighting style evolved from the dramatic demands of the story. The locale of "Streetcar," an important motivating force of the plot structure, is a street called Elysian Fields in the Old Quarter of New Orleans. Here, Blanche DuBois, (Vivian Leigh) a pathetic dreamer of dreams, wanders one day. Her world of magic, created as a buffer against sordid truth, is destroyed by two men—her brother-in-law, who hates her on sight, and his friend, who fails her when she needs understanding and devotion most. Defenseless, Blanche goes tragically to her ruin, as her sister and sympathic neighbors look on, unable to help.

This savage exposé of raw emotion is strong stuff—and there will undoubtedly be those who will consider this film (like "Ace in the Hole") sordid, depressing and too nakedly real.

To capture the emotional violence of the plot on celluloid, Stradling arrived

(ADV.)



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at a photographic style that is at least as honest as every other phase of this remarkable production. His task was to create the atmosphere of a steaming, dirty, evil-smelling fragment of what was once the most lavish quarter of a fabulous city. Elysian Fields lingers shabbily in the shadow of its ghostly former elegance. Its inhabitants are a crew of primatively passionate beings—and the atmosphere of the setting is very much a part of their violent behavior.

The effect of this locale on the screen is a perfect combination of settings by five-time Academy Award winner Richard Day, and the photography of Stradling. The exterior street scene, constructed inside Stage One of the Warner Brothers' lot, is lighted for low-key night effect to provide a mood of sordidness softened by the romance of fantasy as visualized through the dream-shrouded eyes of the main character. Added to the effect of the lighting is a fine mist, so subtle and yet so compelling that one can actually feel the oppressive humidity of New Orleans.

The night effect of this street is in striking contrast to the day scenes which transform the Quarter into a teeming, raucous mélange of sound and color. Photographically, this contrast in lighting key adds powerful shading to the dramatics of the story. The main action, however, takes place within a shabby, crowded apartment to which clings only the faintest trace of a bygone elegance. Within this confined space is played the main action of the film, and it was a great challenge to light this confined space as a suitably modulated background for the great range of emotion projected against it. Stradling achieved this result through an honest style of low-key that chucked glamor out the window and dragged in reality by the hair of the head.

Stradling is enthusiastic in his praise of director Elia Kazan, maintaining that the film's photographic honesty is due in great measure to the fact that he was encouraged by this fine director to kick over the cinematic traces. " 'Gadge' Kazan kept telling us all to be bold, until finally 'be bold!' came to be a kind of battle cry on the set. It was wonderful to be able to light a picture without having to worry about the fact that the star's face would be in shadow during part of the scene. When a light burned out, we'd often leave it out, because the effect was more honest and dramatic that way."

Stradling was no less impressed by the artistic integrity of the star, Vivian Leigh. A very lovely person in real life, Miss Leigh kept coming up to ask him if she were wearing enough make-up to make her look old and haggard for the role. She was quite willing to use more, if necessary. After years of having to use every trick in the book to make actresses look their glamourous best, Stradling found Miss Leigh's attitude most refreshing.

One of the most interesting lighting effects in the film is used in the sequence in which Miss Leigh, portraying the hallucinations of approaching madness, dresses in a crumpled white satin evening gown complete with rhinestone tiara, and dances about the room in the belief that she is an elegant Southern belle who has just received an invitation for a cruise in the Mediterranean. The room is supposedly illuminated only by small, subtly shaded lamps. In the romantic lighting thus produced, she looks ethereal, with a fragile loveliness that ties in perfectly with her fancied image of herself.

At this moment, the antagonist enters the room and switches on the main light. Instantly the illusion is shattered.

(*Continued on Page 428*)

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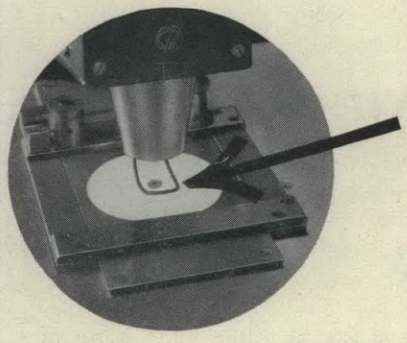


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CURRENT ASSIGNMENTS of A. S. C. MEMBERS

Major film productions on which members of the American Society of Cinematographers directed the photography during September.

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Columbia

• FRANK PLANER, "Death of A Salesman," with Frederick March, Mildred Dunnock. Laslo Benedek, director.
• WILLIAM SKALL, "Golden Hawk," (Technicolor) with Rhonda Fleming, Sterling Hayden. Sid Salkow, director.
• HAL MOHR, "Fourposter," with Rex Harrison, Lilli Palmer. Irving Reis, director.
• JOSEPH WALKER, "The Marrying Kind," with Judy Holliday. George Cukor, director.
• WILLIAM BRADFORD, "Night Stage to Galveston," with Gene Autrey. George Archinbaud, director.
• CHARLES LAWTON, "The Mother," with Loretta Young. Rudy Mate, director.
• BURNETT GUFFEY, "The Sniper," with Adolphe Menjou, Marie Windsor. Edward Dmytryk, director.
• GUY ROE, "My Six Convicts," with John Beal, Millard Mitchell. Hugo Fregonese, director.
• HENRY FREULICH, "Montana Territory," with Lon McCallister, Wanda Hendrix. Ray Nazarro, direrton.

Independent

• ERNEST LASZLO, "Three For Bedroom C," with Gloria Swanson. Milton Bren, director.
• PAUL IVANO, "For Men Only," with Paul Henreid, Margaret Field. Paul Henreid, director.
• JOSEPH BIROC, "The Bushwhackers," with John Ireland, Dorothy Malone. Rod Amateau, director.
• FLOYD CROSBY, "High Noon," with Gary Cooper. Fred Zinnemann, director.

M-G-M

• FREDDIE YOUNG, "Ivanhoe," with Robert Taylor, Eliz. Taylor. Richard Thorpe, director.
• CHARLES ROSHER, "Scaramouche," with Stewart Granger, Eleanor Parker. George Sidney, director.
• WILLIAM MELLOR, "Skirts Ahoy," with Esther Williams, Joan Evans. Sidney Lanfield, director.
• JOSEPH RUTTENBERG, "Young Man In A Hurry," with Glenn Ford and Ruth Roman. Mitchell Leisen, director.
• ROBERT PLANCK, "Belle Of New York," with Fred Astair, Vera Ellen. Charles Walters, director.
• HAROLD ROSSON, "Singin' In The Rain," with Gene Kelly, Debbie Reynolds. Gene Kelly and Stanley Donen, directors.
• RAY JUNE, "The Invitation," with Dorothy McGuire and Van Johnson. Gottfried Reinhardt, director.
• ROBERT SURTEES, "The Merry Widow," (Technicolor) with Lana Turner. Curtis Bernhardt, director.
• GEORGE FOLSEY, "Lovely To Look At," with Kathryn Grayson, Red Skelton. Mervyn LeRoy, director.

Monogram

• WILLIAM SICKNER, "Northwest Territory," with Kirby Grant, Gloria Saunders. Frank McDonald, director.
• HARRY NEUMANN, "Rodeo," with Jane High, Don Archer. William Beaudine, director.

Paramount

- LOYAL GRIGGS, "Shane," (Technicolor) with Alan Ladd, Jean Arthur. George Stevens, director.
- HARRY WILD, "Son of Paleface," (Technicolor) with Bob Hope, Jane Russell. Frank Tashlin, director.
- GEORGE BARNES, "Somebody Loves Me," (Technicolor) with Betty Hutton. Irving Brecher, director.
- DANIEL FAPP, "Sailor Beware," with Dean Martin, Jerry Lewis. Hal Walker, director.

R.K.O.

- RUSSELL HARLAN, "The Big Sky," with Kirk Douglas. Howard Hawks, director.
- WILLIAM SNYDER, "The Korean Story," with Robert Mitchum. Tay Garnett, director.
- HARRY STRADLING, "Androcles and The Lion," with Jean Simmons, Victor Mature. Chester Erskine, director.
- KARL STRUSS, "Tarzan The Hunted," with Lex Barker, Dorothy Hart. Cyril Endfield, director.

20th Century Fox

- NORBERT BRODINE, "Five Fingers," with James Mason. Jos. L. Mankiewicz, director.
- LEON SHAMROY, "Wait Till The Sun Shines, Nellie," with Jean Peters, David Wayne. Henry King, director.
- ARTHUR ARLING, "Belles On Their Toes," (Technicolor) with Jeanne Crain, Myrna Loy. Henry Levin, director.
- MILTON KRASNER, "Phone Call From A Stranger," with Gary Merril, Shelley Winters. Jean Negulesco, director.
- LUCIEN BALLARD, "Return Of The Texan," with Dale Robertson, Richard Boone. Delmer Daves, director.

Universal-International

- IRVING GLASSBERG, "Bend In The River," with James Stewart, Arthur Kennedy. Anthony Mann, director.
- MAURY GERTSMAN, "Son of Ali Baba," with Tony Curtis, Piper Laurie. Kurt Neumann, director.
- CLIFF STINE, "Broncho Buster," with John Lund, Joyce Holden. Budd Boetticher, director.
- CARL GUTHRIE, "Francis Covers The Big Town," with Donald O'Connor, Nancy Guild. Arthur Lubin, director.
- RUSSELL METTY, "The World In His Arms," with Gregory Peck, Ann Blyth. Roaul Walsh, director.
- CHARLES BOYLE, "Steel Town," (Tech.) with Ann Sheridan, John Lund. George Sherwood, director.

Warner Brothers

- TED MCCORD, "I'll See You In My Dreams," with Doris Day. Michael Curtiz, director.
- JOHN BOYLE, "Carson City," with Randolph Scott, Raymond Massey. Andrew de Toth, director.
- ED DUPAR, "The Lion And The Horse," with Steve Cochran. Louis King, director.
- ROBERT BURKS, "Room For One More," with Cary Grant, Betsy Drake. Norman Taurog, director.
- WILFRID CLINE, "She's Working Her Way Through College," with Virginia Mayo, Ronald Reagan. Bruce Humberstone, director.
- TED MCCORD, "This Woman Is Dangerous," with Joan Crawford. Felix Feist, director.
- WARREN LYNCH, "Retreat, Hell!" with Frank Lovejoy, Richard Carlson. Joseph Lewis, director.

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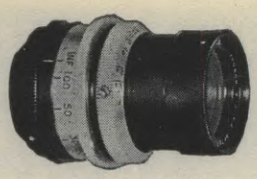
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UNINHIBITED CAMERA

(Continued from Page 425)

The evening gown looks cheap and gaudy; the rhinestone tiara looks like dime-store rubbish; the woman herself looks dissolute and worn—old with the compressed age of imminent madness. The two sharply contrasting styles of lighting used so closely together account for much of the impact of the sequence.

Another dramatic sequence, involving a knock-down-drag-out brawl between the drunken brother-in-law and his card-playing buddies is filmed entirely with rim-light, creating an atmosphere of harsh brutality the likes of which have seldom been recorded on film. Here again, it is as much that which is left to the imagination, as that which is actually shown, that gives the sequence its hammer-like punch.

From the purely mechanical standpoint, photography of the picture within its main set presented certain problems. The set was necessarily a small one, since much of the dramatic impact of the plot arises from the basic situation of three volatile personalities confined in close quarters. The problem was to preserve the feeling of cramped space, while still allowing the camera mobility and a variety of angles.

Removable or "wild" walls permitted camera set-ups from almost every angle, but even so it was the originality of the director of photography that accounted for the great variety of point of view from which the action was filmed. Even the shots made from directly overhead are well-motivated and add greatly to the dramatic effect.

Fluid camera (as thought of in terms of boom, dolly and tracking shots) was severely limited by the set plan, so instead the action was played up to and away from camera, creating an effect of fluid action in relation to the lens. The large number of striking close-ups in the film point up every flick of an eyelash for fullest effect.

Stradling's compositions are extremely forceful, especially the split-focus shots characterized by a large head in the foreground and a full figure dominating the background. As every technician knows, such shots usually call for a wide-angle lens—but a wide-angle would have exaggerated the perspective of the rooms, making them look too large and destroying the closed-in effect. As a result, the entire production had to be shot (and the necessary compositional effects achieved) with 35mm, 40mm, 50mm, and 75mm lenses.

To film actual scenes of New Orleans (most of which unfortunately do not appear in the final cut), the cast and crew went on a four-day location jaunt to that fabled city. Working all night, they shot scenes at the L. and N. Station at the foot of Canal Street, while literally thousands of people looked on. Although the original streetcar named Desire has since been replaced by a bus named Desire in busy New Orleans, the city made it possible for the star to ride the trolley by importing one of the retired trams and putting it into active service once more, just for the film incident.

Commenting on the filming of the picture, Harry Stradling explains: "There are two facts that worked very much in my favor while shooting 'Streetcar.' One is the complete free rein given me by the production heads. I was encouraged to plan and execute the photography exactly as I saw it in terms of the script. My camera was not inhibited by any cut-and-dried rules. The second advantage was the two days' of rehearsal shooting we did prior to actual production. The shooting done in these two days was not meant to be used in the picture. It was set up solely as a method of experiment, to try out effects and set a definite style. As a result, the actual shooting went much faster, and we weren't forced to do our experimenting while shooting for keeps."

For Harry Stradling, A.S.C., "Streetcar" was an important milestone in a long and eventful career. When just 16 years old he began his career as an assistant to his uncle who was Mary Pickford's first cameraman at the Famous Players-Lasky Studio in New York. After that, he worked in rapid sequence as assistant to ten or twelve other cameramen, including George Folsey and Ernie Haller. At the ripe old age of 19 he became a full-fledged director of photography, probably the youngest in the history of the industry. He worked on one of the first talkies in 1929, a film called "Syncopation," starring Morton Downey. He then sailed for Paris supposedly to film one picture, and ended up staying in that magic city for six years.

Stradling was brought to Hollywood under contract to David O. Selznick, but his first picture was "My Son, My Son," for Edward Small.

When his contract was completed, he signed with Samuel Goldwyn, and his first effort for that producer was "Edge of Doom." On loan-out he shot "Valentino" for Edward Small and "My Son John" (unreleased) for Paramount. He recently completed "I Want You" for Goldwyn and is currently at work on "Androcles and the Lion" at R.K.O.

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(*Continued from Page 406*)

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S.M.P.T.E. CONVENES

(*Continued from Page 390*)

reports, discussions and demonstrations dealing with the latest developments in stereo or three-dimensional motion picture projection. This closing session is scheduled for the Academy Award Theatre Friday evening.

Members have been encouraged to take their wives to the convention. An attractive week-long program of entertainment is being prepared for them by the ladies committee, headed by Mrs. Charles R. Daily.

Not included in the tentative convention program are many committee reports which the chairmen of several engineering committees are planning to submit. As these develop, they will be scheduled for presentation during the most nearly related technical session.

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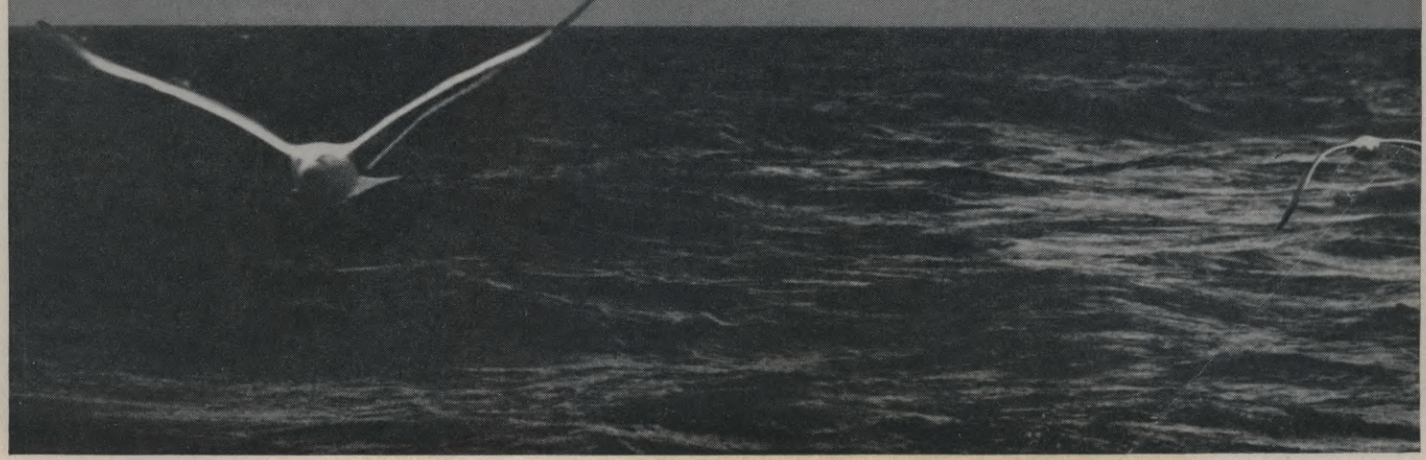
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